

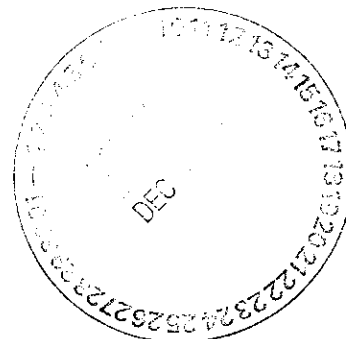


EBERLINE SERVICES

0059100

December 4, 2002

Ms. Joan Kessner
Bechtel Hanford Inc.
3350 George Washington Way
Richland, WA 99352
MSIN: H0-025



Reference: P.O. #630
Eberline Services R2-11-011-7722, SDG-H1952
R2-11-012-7723

Dear Ms. Kessner:

Enclosed is the data report for forty-eight solid samples designated under SAF No. B00-029 received at Eberline Services on November 6, 2002. The samples were analyzed according to the accompanying chain-of-custody documents.

Please call if you have any questions concerning this report.

Sincerely,

Melissa C. Mannion

Melissa C. Mannion
Program Manager

MCM

Enclosure: Data Package

RECEIVED
APR 28 2003
EDMC

Analytical Services
2030 Wright Avenue
P.O. Box 4040
Richmond, California 94804-0040
(510) 235-2633 Fax (510) 235-0438
Toll Free (800) 841-5487
www.eberlineservices.com

1.0 GENERAL

Bechtel Hanford Inc. (BHI) Sample Delivery Group H1952 was composed of forty-eight solid (soil) samples designated under SAF No. B00-029 with a Project Designation of: 100 F Area – Quick Turn.

The samples were received as stated on the Chain-of-Custody documents. Any discrepancies are noted on the Eberline Services Sample Receipt Checklist. The results were transmitted to BHI via e-fax on November 14, 2002. The electronic data deliverables (EDD) were transmitted to BHI via e-mail on November 14, 2002.

2.0 ANALYSIS NOTES

2.1 Gamma Screen Analyses

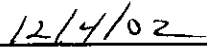
No problems were encountered during the course of the analyses.

Case Narrative Certification Statement

"I certify that this data package is in compliance with the SOW, both technically and for completeness, for other than the conditions detailed above. Release of the data obtained in this hard copy data package has been authorized by the Laboratory Manager or a designee, as verified by the following signature."



Melissa C. Mannion
Program Manager



Date

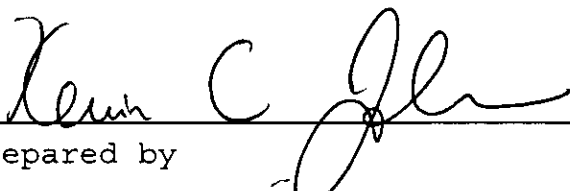
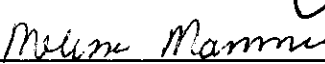
EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H1952

SDG 7722
Contact Melissa C. Mannion

Client Hanford
Contract No. 630
Case no SDG H1952

S U M M A R Y D A T A S E C T I O N

T A B L E O F C O N T E N T S				
About this section	.	.	.	1
Sample Summaries	.	.	.	3
Prep Batch Summary	.	.	.	5
Work Summary	.	.	.	6
Method Blanks	.	.	.	9
Data Sheets	.	.	.	10
Method Summaries	.	.	.	34
Report Guides	.	.	.	36
End of Section	.	.	.	50


Prepared by

Reviewed by

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-TOC
Version 3.06
Report date 11/14/02

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H1952

SDG 7722
Contact Melissa C. Mannion

REPORT GUIDE

Client Hanford
Contract No. 630
Case no SDG_H1952

ABOUT THE DATA SUMMARY SECTION

The Data Summary Section of a Data Package has all data, in several useful orders, necessary for first level, routine review of the data package for a Sample Delivery Group (SDG). This section follows the Data Package Narrative, which has an overview of the data package and a discussion of special problems. It is followed by the Raw Data Section, which has full details.

The Data Summary Section has several groups of reports:

SAMPLE SUMMARIES

The Sample and QC Summary Reports show all samples, including QC samples, reported in one SDG. These reports cross-reference client and lab sample identifiers.

PREPARATION BATCH SUMMARY

The Preparation Batch Summary Report shows all preparation batches (lab groupings reflecting how work was organized) relevant to the reported SDG with information necessary to check the completeness and consistency of the SDG.

WORK SUMMARY

The Work Summary Report shows all samples and work done on them relevant to the reported SDG.

METHOD BLANKS

The Method Blank Reports, one for each Method Blank relevant to the SDG, show all results and primary supporting information for the blanks.

LAB CONTROL SAMPLES

The Lab Control Sample Reports, one for each Lab Control Sample relevant to the SDG, show all results, recoveries and primary supporting information for these QC samples.

REPORT GUIDES

Page 1

SUMMARY DATA SECTION

Page 1

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 11/14/02

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H1952

SDG 7722
Contact Melissa C. Mannion

GUIDE, cont.

Client Hanford
Contract No. 630
Case no SDG H1952

ABOUT THE DATA SUMMARY SECTION

DUPLICATES

The Duplicate Reports, one for each Duplicate and Original sample pair relevant to the SDG, show all results, differences and primary supporting information for these QC samples.

MATRIX SPIKES

The Matrix Spike Reports, one for each Spiked and Original sample pair relevant to the SDG, show all results, recoveries and primary supporting information for these QC samples.

DATA SHEETS

The Data Sheet Reports, one for each client sample in the SDG, show all results and primary supporting information for these samples.

METHOD SUMMARIES

The Method Summary Reports, one for each test used in the SDG, show all results, QC and method performance data for one analyte on one or two pages. (A test is a short code for the method used to do certain work to the client's specification.)

REPORT GUIDES

The Report Guides, one for each of the above groups of reports, have documentation on how to read the associated reports.

REPORT GUIDES

Page 2

SUMMARY DATA SECTION

Page 2

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 11/14/02

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP H1952

SDG 7722

Contact Melissa C. Mannion

LAB SAMPLE SUMMARY

Client Hanford

Contract No. 630

Case no SDG H1952

LAB							CHAIN OF	
SAMPLE ID	CLIENT SAMPLE ID	LOCATION	MATRIX	LEVEL	SAF NO	CUSTODY	COLLECTED	
R211011-01	J00111	116-F-6	SOLID		B00-029	B00-029-226	11/04/02 09:20	
R211011-02	J00112	116-F-6	SOLID		B00-029	B00-029-226	11/04/02 09:23	
R211011-03	J00113	116-F-6	SOLID		B00-029	B00-029-226	11/04/02 09:25	
R211011-04	J00114	116-F-6	SOLID		B00-029	B00-029-226	11/04/02 09:27	
R211011-05	J00115	116-F-6	SOLID		B00-029	B00-029-226	11/04/02 09:28	
R211011-06	J00116	116-F-6	SOLID		B00-029	B00-029-226	11/04/02 09:31	
R211011-07	J00117	116-F-6	SOLID		B00-029	B00-029-226	11/04/02 09:34	
R211011-08	J00118	116-F-6	SOLID		B00-029	B00-029-226	11/04/02 09:37	
R211011-09	J00119	116-F-6	SOLID		B00-029	B00-029-226	11/04/02 09:41	
R211011-10	J00120	116-F-6	SOLID		B00-029	B00-029-226	11/04/02 10:03	
R211011-11	J00121	116-F-6	SOLID		B00-029	B00-029-226	11/04/02 10:07	
R211011-12	J00122	116-F-6	SOLID		B00-029	B00-029-226	11/04/02 10:10	
R211011-13	J00123	116-F-6	SOLID		B00-029	B00-029-226	11/04/02 10:13	
R211011-14	J00124	116-F-6	SOLID		B00-029	B00-029-226	11/04/02 10:15	
R211011-15	J00125	116-F-6	SOLID		B00-029	B00-029-226	11/04/02 10:18	
R211011-16	J00126	116-F-6	SOLID		B00-029	B00-029-226	11/04/02 10:20	
R211011-17	J00127	116-F-6	SOLID		B00-029	B00-029-226	11/04/02 10:22	
R211011-18	J00128	116-F-6	SOLID		B00-029	B00-029-226	11/04/02 10:25	
R211011-19	J00129	116-F-6	SOLID		B00-029	B00-029-226	11/04/02 10:28	
R211011-20	J00130	116-F-6	SOLID		B00-029	B00-029-226	11/04/02 10:31	
R211011-21	J00131	116-F-6	SOLID		B00-029	B00-029-226	11/04/02 10:33	
R211011-22	J00132	116-F-6	SOLID		B00-029	B00-029-226	11/04/02 10:35	
R211011-23	J00133	116-F-6	SOLID		B00-029	B00-029-226	11/04/02 10:37	
R211011-24	J00134	116-F-6	SOLID		B00-029	B00-029-226	11/04/02 10:40	
R211011-25	Method Blank		SOLID		B00-029			

LAB SUMMARY

Page 1

SUMMARY DATA SECTION

Page 3

Lab id EBRLNE

Protocol Hanford

Version Ver 1.0

Form DVD-LS

Version 3.06

Report date 11/14/02

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP H1952

QC SUMMARY

SDG 7722
Contact Melissa C. Mannion

Client Hanford
Contract No. 630
Case no SDG H1952

QC BATCH	CHAIN OF CUSTODY	CLIENT SAMPLE ID	MATRIX	% SOLIDS	SAMPLE AMOUNT	BASIS AMOUNT	DAYS SINCE RECEIVED	LAB COLL	LAB SAMPLE ID	DEPARTMENT SAMPLE ID
7722	B00-029-226	J00111	SOLID	100.0	835.8 g		11/06/02	2	R211011-01	7722-001
		J00112	SOLID	100.0	944.2 g		11/06/02	2	R211011-02	7722-002
		J00113	SOLID	100.0	822.0 g		11/06/02	2	R211011-03	7722-003
		J00114	SOLID	100.0	919.5 g		11/06/02	2	R211011-04	7722-004
		J00115	SOLID	100.0	943.7 g		11/06/02	2	R211011-05	7722-005
		J00116	SOLID	100.0	822.7 g		11/06/02	2	R211011-06	7722-006
		J00117	SOLID	100.0	870.3 g		11/06/02	2	R211011-07	7722-007
		J00118	SOLID	100.0	894.1 g		11/06/02	2	R211011-08	7722-008
		J00119	SOLID	100.0	851.7 g		11/06/02	2	R211011-09	7722-009
		J00120	SOLID	100.0	938.4 g		11/06/02	2	R211011-10	7722-010
		J00121	SOLID	100.0	852.0 g		11/06/02	2	R211011-11	7722-011
		J00122	SOLID	100.0	888.3 g		11/06/02	2	R211011-12	7722-012
		J00123	SOLID	100.0	924.9 g		11/06/02	2	R211011-13	7722-013
		J00124	SOLID	100.0	778.1 g		11/06/02	2	R211011-14	7722-014
		J00125	SOLID	100.0	898.2 g		11/06/02	2	R211011-15	7722-015
		J00126	SOLID	100.0	765.3 g		11/06/02	2	R211011-16	7722-016
		J00127	SOLID	100.0	926.0 g		11/06/02	2	R211011-17	7722-017
		J00128	SOLID	100.0	821.6 g		11/06/02	2	R211011-18	7722-018
		J00129	SOLID	100.0	802.3 g		11/06/02	2	R211011-19	7722-019
		J00130	SOLID	100.0	727.2 g		11/06/02	2	R211011-20	7722-020
		J00131	SOLID	100.0	821.6 g		11/06/02	2	R211011-21	7722-021
		J00132	SOLID	100.0	926.8 g		11/06/02	2	R211011-22	7722-022
		J00133	SOLID	100.0	639.2 g		11/06/02	2	R211011-23	7722-023
		J00134	SOLID	100.0	743.5 g		11/06/02	2	R211011-24	7722-024
		Method Blank	SOLID						R211011-25	7722-025

QC SUMMARY

Page 1

SUMMARY DATA SECTION

Page 4

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-QS
Version 3.06
Report date 11/14/02

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP H1952

PREP BATCH SUMMARY

SDG 7722

Contact Melissa C. Mannion

Client Hanford

Contract No. 630

Case no SDG H1952

TEST	MATRIX	METHOD	PREPARATION ERROR		PLANCHETS ANALYZED					QUALI-	
			BATCH	2σ %	CLIENT	MORE	RE	BLANK	LCS	DUP/ORIG	MS/ORIG	FIERS
Gamma Spectroscopy											
GAM	SOLID	Gamma Scan	7032-071	15.0	24			1			

Duplicates and Matrix Spikes are those with original (Client) sample in this Sample Delivery Group.

Blank and LCS planchets are those in the same preparation batch as some Client, Duplicate or Spike sample.

PREP BATCH SUMMARY

Page 1

SUMMARY DATA SECTION

Page 5

Lab id EBRLNE

Protocol Hanford

Version Ver 1.0

Form DVD-PBS

Version 3.06

Report date 11/14/02

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP H1952

SDG 7722

Contact Melissa C. Mannion

LAB WORK SUMMARY

Client Hanford

Contract No. 630

Case no SDG H1952

LAB SAMPLE COLLECTED RECEIVED	CLIENT SAMPLE ID LOCATION CUSTODY	SAF No	MATRIX	PLANCHET	TEST	SUF- FIX	ANALYZED	REVIEWED	BY	METHOD
R211011-01 11/04/02 11/06/02	J00111 116-F-6 B00-029-226	B00-029	SOLID	7722-001	GAM		11/13/02	11/14/02	NJV	Gamma Scan
R211011-02 11/04/02 11/06/02	J00112 116-F-6 B00-029-226	B00-029	SOLID	7722-002	GAM		11/13/02	11/14/02	NJV	Gamma Scan
R211011-03 11/04/02 11/06/02	J00113 116-F-6 B00-029-226	B00-029	SOLID	7722-003	GAM		11/13/02	11/14/02	NJV	Gamma Scan
R211011-04 11/04/02 11/06/02	J00114 116-F-6 B00-029-226	B00-029	SOLID	7722-004	GAM		11/13/02	11/14/02	NJV	Gamma Scan
R211011-05 11/04/02 11/06/02	J00115 116-F-6 B00-029-226	B00-029	SOLID	7722-005	GAM		11/13/02	11/14/02	NJV	Gamma Scan
R211011-06 11/04/02 11/06/02	J00116 116-F-6 B00-029-226	B00-029	SOLID	7722-006	GAM		11/13/02	11/14/02	NJV	Gamma Scan
R211011-07 11/04/02 11/06/02	J00117 116-F-6 B00-029-226	B00-029	SOLID	7722-007	GAM		11/13/02	11/14/02	NJV	Gamma Scan
R211011-08 11/04/02 11/06/02	J00118 116-F-6 B00-029-226	B00-029	SOLID	7722-008	GAM		11/13/02	11/14/02	NJV	Gamma Scan
R211011-09 11/04/02 11/06/02	J00119 116-F-6 B00-029-226	B00-029	SOLID	7722-009	GAM		11/13/02	11/14/02	NJV	Gamma Scan
R211011-10 11/04/02 11/06/02	J00120 116-F-6 B00-029-226	B00-029	SOLID	7722-010	GAM		11/13/02	11/14/02	NJV	Gamma Scan

WORK SUMMARY

Page 1

SUMMARY DATA SECTION

Page 6

Lab id EBRLNE

Protocol Hanford

Version Ver 1.0

Form DVD-LWS

Version 3.06

Report date 11/14/02

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP H1952

SDG 7722

Contact Melissa C. Mannion

WORK SUMMARY, cont.

Client Hanford

Contract No. 630

Case no SDG H1952

LAB SAMPLE	CLIENT SAMPLE ID									
COLLECTED	LOCATION	MATRIX			SUF-					
RECEIVED	CUSTODY	SAF No	PLANCHET	TEST	FIX	ANALYZED	REVIEWED	BY	METHOD	
R211011-11	J00121		7722-011	GAM		11/13/02	11/14/02	NJV	Gamma Scan	
11/04/02	116-F-6	SOLID								
11/06/02	B00-029-226	B00-029								
R211011-12	J00122		7722-012	GAM		11/13/02	11/14/02	NJV	Gamma Scan	
11/04/02	116-F-6	SOLID								
11/06/02	B00-029-226	B00-029								
R211011-13	J00123		7722-013	GAM		11/13/02	11/14/02	NJV	Gamma Scan	
11/04/02	116-F-6	SOLID								
11/06/02	B00-029-226	B00-029								
R211011-14	J00124		7722-014	GAM		11/13/02	11/14/02	NJV	Gamma Scan	
11/04/02	116-F-6	SOLID								
11/06/02	B00-029-226	B00-029								
R211011-15	J00125		7722-015	GAM		11/13/02	11/14/02	NJV	Gamma Scan	
11/04/02	116-F-6	SOLID								
11/06/02	B00-029-226	B00-029								
R211011-16	J00126		7722-016	GAM		11/13/02	11/14/02	NJV	Gamma Scan	
11/04/02	116-F-6	SOLID								
11/06/02	B00-029-226	B00-029								
R211011-17	J00127		7722-017	GAM		11/13/02	11/14/02	NJV	Gamma Scan	
11/04/02	116-F-6	SOLID								
11/06/02	B00-029-226	B00-029								
R211011-18	J00128		7722-018	GAM		11/13/02	11/14/02	NJV	Gamma Scan	
11/04/02	116-F-6	SOLID								
11/06/02	B00-029-226	B00-029								
R211011-19	J00129		7722-019	GAM		11/13/02	11/14/02	NJV	Gamma Scan	
11/04/02	116-F-6	SOLID								
11/06/02	B00-029-226	B00-029								
R211011-20	J00130		7722-020	GAM		11/13/02	11/14/02	NJV	Gamma Scan	
11/04/02	116-F-6	SOLID								
11/06/02	B00-029-226	B00-029								

WORK SUMMARY

Page 2

SUMMARY DATA SECTION

Page 7

Lab id EBRLNE

Protocol Hanford

Version Ver 1.0

Form DVD-LWS

Version 3.06

Report date 11/14/02

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP H1952

SDG 7722

Contact Melissa C. Mannion

WORK SUMMARY, cont.

Client Hanford

Contract No. 630

Case no SDG H1952

LAB SAMPLE	CLIENT SAMPLE ID										
COLLECTED	LOCATION	MATRIX		SUF-							
RECEIVED	CUSTODY	SAF No	PLANCHET	TEST	FIX	ANALYZED	REVIEWED	BY	METHOD		
R211011-21	J00131		7722-021	GAM		11/13/02	11/14/02	NJV	Gamma Scan		
11/04/02	116-F-6		SOLID								
11/06/02	B00-029-226	B00-029									
R211011-22	J00132		7722-022	GAM		11/13/02	11/14/02	NJV	Gamma Scan		
11/04/02	116-F-6		SOLID								
11/06/02	B00-029-226	B00-029									
R211011-23	J00133		7722-023	GAM		11/13/02	11/14/02	NJV	Gamma Scan		
11/04/02	116-F-6		SOLID								
11/06/02	B00-029-226	B00-029									
R211011-24	J00134		7722-024	GAM		11/13/02	11/14/02	NJV	Gamma Scan		
11/04/02	116-F-6		SOLID								
11/06/02	B00-029-226	B00-029									
R211011-25	Method Blank		7722-025	GAM		11/13/02	11/14/02	NJV	Gamma Scan		
			SOLID								
		B00-029									

COUNTS OF TESTS BY SAMPLE TYPE

TEST	SAF No	METHOD	REFERENCE	CLIENT	MORE	RE	BLANK	LCS	DUP SPIKE	TOTAL
GAM	B00-029	Gamma Scan	GAMMA_GS	24			1			25
TOTALS				24			1			25

WORK SUMMARY

Page 3

SUMMARY DATA SECTION

Page 8

Lab id EBRLNE

Protocol Hanford

Version Ver 1.0

Form DVD-LWS

Version 3.06

Report date 11/14/02

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H1952

7722-025

Method Blank

METHOD BLANK

SDG <u>7722</u>	Client/Case no <u>Hanford</u>	SDG <u>H1952</u>
Contact <u>Melissa C. Mannion</u>	Contract No. <u>630</u>	
Lab sample id <u>R211011-25</u>	Client sample id <u>Method Blank</u>	
Dept sample id <u>7722-025</u>	Material/Matrix _____	<u>SOLID</u>
	SAF No <u>B00-029</u>	

ANALYTE	CAS NO	RESULT pCi/g	2 σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		0.026	0.050	U	GAM
Cesium 137	10045-97-3	U		0.022	0.10	U	GAM
Europium 152	14683-23-9	U		0.051	0.10	U	GAM
Europium 154	15585-10-1	U		0.043	0.10	U	GAM
Europium 155	14391-16-3	U		0.061	0.10	U	GAM
Americium 241	14596-10-2	U		0.15		U	GAM

100 F Area - Quick Turn

QC-BLANK 43117

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H1952

7722-001

J00111

DATA SHEET

SDG <u>7722</u>	Client/Case no <u>Hanford</u>	SDG <u>H1952</u>
Contact <u>Melissa C. Mannion</u>	Contract No. <u>630</u>	
Lab sample id <u>R211011-01</u>	Client sample id <u>J00111</u>	
Dept sample id <u>7722-001</u>	Location/Matrix <u>116-F-6</u>	<u>SOLID</u>
Received <u>11/06/02</u>	Collected/Weight <u>11/04/02 09:20</u>	<u>835.8 g</u>
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-226</u>	<u>B00-029</u>

ANALYTE	CAS NO	RESULT pCi/g	2 σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.10</u>	0.050	U	GAM
Cesium 137	10045-97-3	0.394	0.095	<u>0.094</u>	0.10		GAM
Europium 152	14683-23-9	U		<u>0.38</u>	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.36</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.16</u>	0.10	U	GAM
Americium 241	14596-10-2	U		<u>0.099</u>		U	GAM

100 F Area - Quick Turn

DATA SHEETS

Page 1

SUMMARY DATA SECTION

Page 10

Lab id <u>EBRLNE</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>11/14/02</u>

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H1952

7722-002

J00112

D A T A S H E E T

SDG <u>7722</u>	Client/Case no <u>Hanford</u>	SDG <u>H1952</u>
Contact <u>Melissa C. Mannion</u>	Contract No. <u>630</u>	
Lab sample id <u>R211011-02</u>	Client sample id <u>J00112</u>	
Dept sample id <u>7722-002</u>	Location/Matrix <u>116-F-6</u>	<u>SOLID</u>
Received <u>11/06/02</u>	Collected/Weight <u>11/04/02 09:23</u>	<u>944.2 g</u>
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-226</u>	<u>B00-029</u>

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.057</u>	0.050	U	GAM
Cesium 137	10045-97-3	0.332	0.051	0.047	0.10		GAM
Europium 152	14683-23-9	0.143	0.075	0.10	0.10		GAM
Europium 154	15585-10-1	U		<u>0.19</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.11</u>	0.10	U	GAM
Americium 241	14596-10-2	U		0.075		U	GAM

100 F Area - Quick Turn

DATA SHEETS

Page 2

SUMMARY DATA SECTION

Page 11

Lab id <u>EBRLNE</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>11/14/02</u>

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H1952

7722-003

J00113

D A T A S H E E T

SDG <u>7722</u>	Client/Case no <u>Hanford</u>	SDG <u>H1952</u>
Contact <u>Melissa C. Mannion</u>	Contract No. <u>630</u>	
Lab sample id <u>R211011-03</u>	Client sample id <u>J00113</u>	
Dept sample id <u>7722-003</u>	Location/Matrix <u>116-F-6</u>	<u>SOLID</u>
Received <u>11/06/02</u>	Collected/Weight <u>11/04/02 09:25</u>	<u>822.0 g</u>
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-226</u>	<u>B00-029</u>

ANALYTE	CAS NO	RESULT pCi/g	2 σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.089</u>	0.050	U	GAM
Cesium 137	10045-97-3	0.558	0.11	<u>0.11</u>	0.10		GAM
Europium 152	14683-23-9	0.346	0.15	<u>0.20</u>	0.10		GAM
Europium 154	15585-10-1	U		<u>0.33</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.22</u>	0.10	U	GAM
Americium 241	14596-10-2	U		<u>0.32</u>		U	GAM

100 F Area - Quick Turn

DATA SHEETS

Page 3

SUMMARY DATA SECTION

Page 12

Lab id <u>EBRLNE</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>11/14/02</u>

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H1952

7722-004

J00114

D A T A S H E E T

SDG <u>7722</u> Contact <u>Melissa C. Mannion</u>	Client/Case no <u>Hanford</u> Contract No. <u>630</u>	SDG <u>H1952</u>
Lab sample id <u>R211011-04</u> Dept sample id <u>7722-004</u> Received <u>11/06/02</u> % solids <u>100.0</u>	Client sample id <u>J00114</u> Location/Matrix <u>116-F-6</u> <u>SOLID</u> Collected/Weight <u>11/04/02 09:27</u> <u>919.5 g</u> Custody/SAF No <u>B00-029-226</u> <u>B00-029</u>	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.055</u>	0.050	U	GAM
Cesium 137	10045-97-3	0.286	0.057	0.053	0.10		GAM
Europium 152	14683-23-9	U		<u>0.20</u>	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.20</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.14</u>	0.10	U	GAM
Americium 241	14596-10-2	U		0.18		U	GAM

100 F Area - Quick Turn

Lab id <u>EBRLNE</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>11/14/02</u>

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H1952

7722-005

J00115

D A T A S H E E T

SDG <u>7722</u>	Client/Case no <u>Hanford</u>	SDG <u>H1952</u>
Contact <u>Melissa C. Mannion</u>	Contract <u>No. 630</u>	
Lab sample id <u>R211011-05</u>	Client sample id <u>J00115</u>	
Dept sample id <u>7722-005</u>	Location/Matrix <u>116-F-6</u>	<u>SOLID</u>
Received <u>11/06/02</u>	Collected/Weight <u>11/04/02 09:28</u>	<u>943.7 g</u>
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-226</u>	<u>B00-029</u>

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.058</u>	0.050	U	GAM
Cesium 137	10045-97-3	0.177	0.057	<u>0.065</u>	0.10		GAM
Europium 152	14683-23-9	U		<u>0.15</u>	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.22</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.20</u>	0.10	U	GAM
Americium 241	14596-10-2	U		<u>0.49</u>		U	GAM

100 F Area - Quick Turn

DATA SHEETS

Page 5

SUMMARY DATA SECTION

Page 14

Lab id <u>EBRLNE</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>11/14/02</u>

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H1952

7722-006

J00116

DATA SHEET

SDG <u>7722</u>	Client/Case no <u>Hanford</u>	SDG <u>H1952</u>
Contact <u>Melissa C. Mannion</u>	Contract No. <u>630</u>	
Lab sample id <u>R211011-06</u>	Client sample id <u>J00116</u>	
Dept sample id <u>7722-006</u>	Location/Matrix <u>116-F-6</u>	<u>SOLID</u>
Received <u>11/06/02</u>	Collected/Weight <u>11/04/02 09:31</u>	<u>822.7 g</u>
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-226</u>	<u>B00-029</u>

ANALYTE	CAS NO	RESULT pCi/g	2 σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.16</u>	0.050	U	GAM
Cesium 137	10045-97-3	0.186	0.087	0.091	0.10		GAM
Europium 152	14683-23-9	0.269	0.16	<u>0.20</u>	0.10		GAM
Europium 154	15585-10-1	U		<u>0.37</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.17</u>	0.10	U	GAM
Americium 241	14596-10-2	U		0.11		U	GAM

100 F Area - Quick Turn

DATA SHEETS

Page 6

SUMMARY DATA SECTION

Page 15

Lab id <u>EBRLNE</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>11/14/02</u>

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H1952

7722-007

J00117

D A T A S H E E T

SDG <u>7722</u>	Client/Case no <u>Hanford</u>	SDG <u>H1952</u>
Contact <u>Melissa C. Mannion</u>	Contract No. <u>630</u>	
Lab sample id <u>R211011-07</u>	Client sample id <u>J00117</u>	
Dept sample id <u>7722-007</u>	Location/Matrix <u>116-F-6</u>	<u>SOLID</u>
Received <u>11/06/02</u>	Collected/Weight <u>11/04/02 09:34</u>	<u>870.3 g</u>
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-226</u>	<u>B00-029</u>

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.057</u>	0.050	U	GAM
Cesium 137	10045-97-3	0.108	0.049	<u>0.057</u>	0.10		GAM
Europium 152	14683-23-9	U		<u>0.21</u>	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.20</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.11</u>	0.10	U	GAM
Americium 241	14596-10-2	U		<u>0.079</u>		U	GAM

100 F Area - Quick Turn

Lab id <u>EBRLNE</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>11/14/02</u>

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H1952

7722-008

J00118

D A T A S H E E T

SDG <u>7722</u>	Client/Case no <u>Hanford</u>	SDG <u>H1952</u>
Contact <u>Melissa C. Mannion</u>	Contract No. <u>630</u>	
Lab sample id <u>R211011-08</u>	Client sample id <u>J00118</u>	
Dept sample id <u>7722-008</u>	Location/Matrix <u>116-F-6</u>	<u>SOLID</u>
Received <u>11/06/02</u>	Collected/Weight <u>11/04/02 09:37</u>	<u>894.1 g</u>
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-226</u>	<u>B00-029</u>

ANALYTE	CAS NO	RESULT pCi/g	2 σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.081</u>	0.050	U	GAM
Cesium 137	10045-97-3	0.237	0.099	0.10	0.10		GAM
Europium 152	14683-23-9	U		<u>0.32</u>	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.22</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.21</u>	0.10	U	GAM
Americium 241	14596-10-2	U		0.30		U	GAM

100 F Area - Quick Turn

DATA SHEETS

Page 8

SUMMARY DATA SECTION

Page 17

Lab id <u>EBRLNE</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>11/14/02</u>

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H1952

7722-009

J00119

D A T A S H E E T

SDG <u>7722</u>	Client/Case no <u>Hanford</u>	SDG <u>H1952</u>
Contact <u>Melissa C. Mannion</u>	Contract No. <u>630</u>	
Lab sample id <u>R211011-09</u>	Client sample id <u>J00119</u>	
Dept sample id <u>7722-009</u>	Location/Matrix <u>116-F-6</u>	<u>SOLID</u>
Received <u>11/06/02</u>	Collected/Weight <u>11/04/02 09:41</u>	<u>851.7 g</u>
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-226</u>	<u>B00-029</u>

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.058</u>	0.050	U	GAM
Cesium 137	10045-97-3	0.394	0.062	<u>0.056</u>	0.10		GAM
Europium 152	14683-23-9	U		<u>0.17</u>	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.21</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.14</u>	0.10	U	GAM
Americium 241	14596-10-2	U		<u>0.19</u>		U	GAM

100 F Area - Quick Turn

DATA SHEETS

Page 9

SUMMARY DATA SECTION

Page 18

Lab id <u>EBRLNE</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>11/14/02</u>

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H1952

7722-010

J00120

DATA SHEET

SDG <u>7722</u>	Client/Case no <u>Hanford</u>	SDG <u>H1952</u>
Contact <u>Melissa C. Mannion</u>	Contract No. <u>630</u>	
Lab sample id <u>R211011-10</u>	Client sample id <u>J00120</u>	
Dept sample id <u>7722-010</u>	Location/Matrix <u>116-F-6</u>	<u>SOLID</u>
Received <u>11/06/02</u>	Collected/Weight <u>11/04/02 10:03</u>	<u>938.4 g</u>
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-226</u>	<u>B00-029</u>

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.067</u>	0.050	U	GAM
Cesium 137	10045-97-3	0.108	0.082	<u>0.067</u>	0.10		GAM
Europium 152	14683-23-9	U		<u>0.15</u>	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.22</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.21</u>	0.10	U	GAM
Americium 241	14596-10-2	U		<u>0.52</u>		U	GAM

100 F Area - Quick Turn

DATA SHEETS

Page 10

SUMMARY DATA SECTION

Page 19

Lab id <u>EBRLNE</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>11/14/02</u>

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H1952

7722-011

J00121

DATA SHEET

SDG <u>7722</u>	Client/Case no <u>Hanford</u>	SDG <u>H1952</u>
Contact <u>Melissa C. Mannion</u>	Contract <u>No. 630</u>	
Lab sample id <u>R211011-11</u>	Client sample id <u>J00121</u>	
Dept sample id <u>7722-011</u>	Location/Matrix <u>116-F-6</u>	<u>SOLID</u>
Received <u>11/06/02</u>	Collected/Weight <u>11/04/02 10:07</u>	<u>852.0 g</u>
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-226</u>	<u>B00-029</u>

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.087</u>	0.050	U	GAM
Cesium 137	10045-97-3	0.108	0.048	0.057	0.10		GAM
Europium 152	14683-23-9	U		<u>0.22</u>	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.36</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.15</u>	0.10	U	GAM
Americium 241	14596-10-2	U		0.095		U	GAM

100 F Area - Quick Turn

DATA SHEETS

Page 11

SUMMARY DATA SECTION

Page 20

Lab id <u>EBRLNE</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>11/14/02</u>

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H1952

7722-012

J00122

DATA SHEET

SDG <u>7722</u>	Client/Case no <u>Hanford</u>	SDG <u>H1952</u>
Contact <u>Melissa C. Mannion</u>	Contract No. <u>630</u>	
Lab sample id <u>R211011-12</u>	Client sample id <u>J00122</u>	
Dept sample id <u>7722-012</u>	Location/Matrix <u>116-F-6</u>	<u>SOLID</u>
Received <u>11/06/02</u>	Collected/Weight <u>11/04/02 10:10</u>	<u>888.3 g</u>
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-226</u>	<u>B00-029</u>

ANALYTE	CAS NO	RESULT pCi/g	2 σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.065</u>	0.050	U	GAM
Cesium 137	10045-97-3	U		<u>0.096</u>	0.10	U	GAM
Europium 152	14683-23-9	U		<u>0.14</u>	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.22</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.11</u>	0.10	U	GAM
Americium 241	14596-10-2	U		<u>0.072</u>		U	GAM

100 F Area - Quick Turn

DATA SHEETS

Page 12

SUMMARY DATA SECTION

Page 21

Lab id <u>EBRLNE</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>11/14/02</u>

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H1952

7722-013

J00123

DATA SHEET

SDG <u>7722</u>	Client/Case no <u>Hanford</u>	SDG <u>H1952</u>
Contact <u>Melissa C. Mannion</u>	Contract <u>No. 630</u>	
Lab sample id <u>R211011-13</u>	Client sample id <u>J00123</u>	
Dept sample id <u>7722-013</u>	Location/Matrix <u>116-F-6</u>	<u>SOLID</u>
Received <u>11/06/02</u>	Collected/Weight <u>11/04/02 10:13</u>	<u>924.9 g</u>
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-226</u>	<u>B00-029</u>

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.071</u>	0.050	U	GAM
Cesium 137	10045-97-3	U		<u>0.10</u>	0.10	U	GAM
Europium 152	14683-23-9	U		<u>0.22</u>	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.33</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.19</u>	0.10	U	GAM
Americium 241	14596-10-2	U		<u>0.27</u>		U	GAM

100 F Area - Quick Turn

DATA SHEETS

Page 13

SUMMARY DATA SECTION

Page 22

Lab id <u>EBRLNE</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>11/14/02</u>

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H1952

7722-014

J00124

DATA SHEET

SDG <u>7722</u>	Client/Case no <u>Hanford</u>	SDG <u>H1952</u>
Contact <u>Melissa C. Mannion</u>	Contract <u>No. 630</u>	
Lab sample id <u>R211011-14</u>	Client sample id <u>J00124</u>	
Dept sample id <u>7722-014</u>	Location/Matrix <u>116-F-6</u>	<u>SOLID</u>
Received <u>11/06/02</u>	Collected/Weight <u>11/04/02 10:15</u>	<u>778.1 g</u>
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-226</u>	<u>B00-029</u>

ANALYTE	CAS NO	RESULT pCi/g	2 σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.066</u>	0.050	U	GAM
Cesium 137	10045-97-3	0.072	0.045	<u>0.053</u>	0.10	J	GAM
Europium 152	14683-23-9	0.161	0.10	<u>0.13</u>	0.10		GAM
Europium 154	15585-10-1	U		<u>0.23</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.15</u>	0.10	U	GAM
Americium 241	14596-10-2	U		<u>0.20</u>		U	GAM

100 F Area - Quick Turn

DATA SHEETS

Page 14

SUMMARY DATA SECTION

Page 23

Lab id <u>EBRLNE</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>11/14/02</u>

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H1952

7722-015

J00125

DATA SHEET

SDG <u>7722</u>	Client/Case no <u>Hanford</u>	SDG <u>H1952</u>
Contact <u>Melissa C. Mannion</u>	Contract No. <u>630</u>	
Lab sample id <u>R211011-15</u>	Client sample id <u>J00125</u>	
Dept sample id <u>7722-015</u>	Location/Matrix <u>116-F-6</u>	<u>SOLID</u>
Received <u>11/06/02</u>	Collected/Weight <u>11/04/02 10:18</u>	<u>898.2 g</u>
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-226</u>	<u>B00-029</u>

ANALYTE	CAS NO	RESULT pCi/g	2 σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.060</u>	0.050	U	GAM
Cesium 137	10045-97-3	U		<u>0.067</u>	0.10	U	GAM
Europium 152	14683-23-9	U		<u>0.14</u>	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.24</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.18</u>	0.10	U	GAM
Americium 241	14596-10-2	U		<u>0.48</u>		U	GAM

100 F Area - Quick Turn

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H1952

7722-016

J00126

D A T A S H E E T

SDG <u>7722</u> Contact <u>Melissa C. Mannion</u>	Client/Case no <u>Hanford</u> Contract <u>No. 630</u>	SDG <u>H1952</u>
Lab sample id <u>R211011-16</u> Dept sample id <u>7722-016</u> Received <u>11/06/02</u> % solids <u>100.0</u>	Client sample id <u>J00126</u> Location/Matrix <u>116-F-6</u> <u>SOLID</u> Collected/Weight <u>11/04/02 10:20</u> <u>765.3 g</u> Custody/SAF No <u>B00-029-226</u> <u>B00-029</u>	

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.11</u>	0.050	U	GAM
Cesium 137	10045-97-3	U		<u>0.095</u>	0.10	U	GAM
Europium 152	14683-23-9	U		<u>0.23</u>	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.37</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.17</u>	0.10	U	GAM
Americium 241	14596-10-2	U		<u>0.11</u>		U	GAM

100 F Area - Quick Turn

DATA SHEETS

Page 16

SUMMARY DATA SECTION

Page 25

Lab id <u>EBRLNE</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>11/14/02</u>

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H1952

7722-017

J00127

DATA SHEET

SDG <u>7722</u>	Client/Case no <u>Hanford</u>	SDG <u>H1952</u>
Contact <u>Melissa C. Mannion</u>	Contract No. <u>630</u>	
Lab sample id <u>R211011-17</u>	Client sample id <u>J00127</u>	
Dept sample id <u>7722-017</u>	Location/Matrix <u>116-F-6</u>	<u>SOLID</u>
Received <u>11/06/02</u>	Collected/Weight <u>11/04/02 10:22</u>	<u>926.0 g</u>
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-226</u>	<u>B00-029</u>

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.063</u>	0.050	U	GAM
Cesium 137	10045-97-3	0.885	0.078	0.061	0.10		GAM
Europium 152	14683-23-9	0.334	0.088	<u>0.12</u>	0.10		GAM
Europium 154	15585-10-1	U		<u>0.20</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.12</u>	0.10	U	GAM
Americium 241	14596-10-2	U		0.081		U	GAM

100 F Area - Quick Turn

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H1952

7722-018

J00128

DATA SHEET

SDG <u>7722</u>	Client/Case no <u>Hanford</u>	SDG <u>H1952</u>
Contact <u>Melissa C. Mannion</u>	Contract No. <u>630</u>	
Lab sample id <u>R211011-18</u>	Client sample id <u>J00128</u>	
Dept sample id <u>7722-018</u>	Location/Matrix <u>116-F-6</u>	<u>SOLID</u>
Received <u>11/06/02</u>	Collected/Weight <u>11/04/02 10:25</u>	<u>821.6 g</u>
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-226</u>	<u>B00-029</u>

ANALYTE	CAS NO	RESULT pCi/g	2 σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.12</u>	0.050	U	GAM
Cesium 137	10045-97-3	U		<u>0.11</u>	0.10	U	GAM
Europium 152	14683-23-9	U		<u>0.22</u>	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.33</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.20</u>	0.10	U	GAM
Americium 241	14596-10-2	U		0.30		U	GAM

100 F Area - Quick Turn

DATA SHEETS

Page 18

SUMMARY DATA SECTION

Page 27

Lab id <u>EBRLNE</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>11/14/02</u>

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H1952

7722-019

J00129

D A T A S H E E T

SDG <u>7722</u>	Client/Case no <u>Hanford</u>	SDG <u>H1952</u>
Contact <u>Melissa C. Mannion</u>	Contract No. <u>630</u>	
Lab sample id <u>R211011-19</u>	Client sample id <u>J00129</u>	
Dept sample id <u>7722-019</u>	Location/Matrix <u>116-F-6</u>	<u>SOLID</u>
Received <u>11/06/02</u>	Collected/Weight <u>11/04/02 10:28</u>	<u>802.3 g</u>
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-226</u>	<u>B00-029</u>

ANALYTE	CAS NO	RESULT pCi/g	2 σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.076</u>	0.050	U	GAM
Cesium 137	10045-97-3	1.74	0.11	<u>0.067</u>	0.10		GAM
Europium 152	14683-23-9	0.635	0.13	<u>0.15</u>	0.10		GAM
Europium 154	15585-10-1	U		<u>0.23</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.16</u>	0.10	U	GAM
Americium 241	14596-10-2	U		<u>0.22</u>		U	GAM

100 F Area - Quick Turn

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H1952

7722-020

J00130

DATA SHEET

SDG <u>7722</u>	Client/Case no <u>Hanford</u>	SDG <u>H1952</u>
Contact <u>Melissa C. Mannion</u>	Contract No. <u>630</u>	
Lab sample id <u>R211011-20</u>	Client sample id <u>J00130</u>	
Dept sample id <u>7722-020</u>	Location/Matrix <u>116-F-6</u>	<u>SOLID</u>
Received <u>11/06/02</u>	Collected/Weight <u>11/04/02 10:31</u>	<u>727.2 g</u>
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-226</u>	<u>B00-029</u>

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.067</u>	0.050	U	GAM
Cesium 137	10045-97-3	0.166	0.090	<u>0.091</u>	0.10		GAM
Europium 152	14683-23-9	U		<u>0.17</u>	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.29</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.23</u>	0.10	U	GAM
Americium 241	14596-10-2	U		<u>0.58</u>		U	GAM

100 F Area - Quick Turn

DATA SHEETS

Page 20

SUMMARY DATA SECTION

Page 29

Lab id <u>EBRLNE</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>11/14/02</u>

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H1952

7722-021

J00131

D A T A S H E E T

SDG <u>7722</u>	Client/Case no <u>Hanford</u>	SDG <u>H1952</u>
Contact <u>Melissa C. Mannion</u>	Contract No. <u>630</u>	
Lab sample id <u>R211011-21</u>	Client sample id <u>J00131</u>	
Dept sample id <u>7722-021</u>	Location/Matrix <u>116-F-6</u>	<u>SOLID</u>
Received <u>11/06/02</u>	Collected/Weight <u>11/04/02 10:33</u>	<u>821.6 g</u>
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-226</u>	<u>B00-029</u>

ANALYTE	CAS NO	RESULT pCi/g	2 σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.056</u>	0.050	U	GAM
Cesium 137	10045-97-3	0.127	0.054	0.052	0.10		GAM
Europium 152	14683-23-9	U		<u>0.11</u>	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.21</u>	0.10	U	GAM
Europium 155	14391-16-3	U		0.088	0.10	U	GAM
Americium 241	14596-10-2	U		0.058		U	GAM

100 F Area - Quick Turn

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H1952

7722-022

J00132

DATA SHEET

SDG <u>7722</u>	Client/Case no <u>Hanford</u>	SDG <u>H1952</u>
Contact <u>Melissa C. Mannion</u>	Contract <u>No. 630</u>	
Lab sample id <u>R211011-22</u>	Client sample id <u>J00132</u>	
Dept sample id <u>7722-022</u>	Location/Matrix <u>116-F-6</u>	<u>SOLID</u>
Received <u>11/06/02</u>	Collected/Weight <u>11/04/02 10:35</u>	<u>926.8 g</u>
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-226</u>	<u>B00-029</u>

ANALYTE	CAS NO	RESULT pCi/g	2 σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		0.030	0.050	U	GAM
Cesium 137	10045-97-3	0.129	0.034	0.035	0.10		GAM
Europium 152	14683-23-9	U		0.099	0.10	U	GAM
Europium 154	15585-10-1	U		0.10	0.10	U	GAM
Europium 155	14391-16-3	U		0.062	0.10	U	GAM
Americium 241	14596-10-2	U		0.045		U	GAM

100 F Area - Quick Turn

DATA SHEETS

Page 22

SUMMARY DATA SECTION

Page 31

Lab id <u>EBRLNE</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>11/14/02</u>

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H1952

7722-023

J00133

D A T A S H E E T

SDG <u>7722</u>	Client/Case no <u>Hanford</u>	SDG <u>H1952</u>
Contact <u>Melissa C. Mannion</u>	Contract No. <u>630</u>	
Lab sample id <u>R211011-23</u>	Client sample id <u>J00133</u>	
Dept sample id <u>7722-023</u>	Location/Matrix <u>116-F-6</u>	<u>SOLID</u>
Received <u>11/06/02</u>	Collected/Weight <u>11/04/02 10:37</u>	<u>639.2 g</u>
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-226</u>	<u>B00-029</u>

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.067</u>	0.050	U	GAM
Cesium 137	10045-97-3	0.390	0.079	0.070	0.10		GAM
Europium 152	14683-23-9	U		<u>0.18</u>	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.16</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.14</u>	0.10	U	GAM
Americium 241	14596-10-2	U		0.21		U	GAM

100 F Area - Quick Turn

DATA SHEETS

Page 23

SUMMARY DATA SECTION

Page 32

Lab id <u>EBRLNE</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>11/14/02</u>

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H1952

7722-024

J00134

DATA SHEET

SDG <u>7722</u>	Client/Case no <u>Hanford</u>	SDG <u>H1952</u>
Contact <u>Melissa C. Mannion</u>	Contract No. <u>630</u>	
Lab sample id <u>R211011-24</u>	Client sample id <u>J00134</u>	
Dept sample id <u>7722-024</u>	Location/Matrix <u>116-F-6</u>	<u>SOLID</u>
Received <u>11/06/02</u>	Collected/Weight <u>11/04/02 10:40</u>	<u>743.5 g</u>
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-226</u>	<u>B00-029</u>

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		0.039	0.050	U	GAM
Cesium 137	10045-97-3	U		0.037	0.10	U	GAM
Europium 152	14683-23-9	U		0.087	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.13</u>	0.10	U	GAM
Europium 155	14391-16-3	U		0.088	0.10	U	GAM
Americium 241	14596-10-2	U		0.11		U	GAM

100 F Area - Quick Turn

Lab id <u>EBRLNE</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>11/14/02</u>

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP H1952

Test GAM Matrix SOLID
SDG 7722
Contact Melissa C. Mannion

LAB METHOD SUMMARY

GAMMA SCAN
GAMMA SPECTROSCOPY

Client Hanford
Contract No. 630
Contract SDG H1952

RESULTS

LAB RAW SUP-
SAMPLE ID TEST FIX PLANCHET CLIENT SAMPLE ID Cobalt 60 Cesium 137

Preparation batch 7032-071

R211011-01	7722-001	J00111	U	0.394
R211011-02	7722-002	J00112	U	0.332
R211011-03	7722-003	J00113	U	0.558
R211011-04	7722-004	J00114	U	0.286
R211011-05	7722-005	J00115	U	0.177
R211011-06	7722-006	J00116	U	0.186
R211011-07	7722-007	J00117	U	0.108
R211011-08	7722-008	J00118	U	0.237
R211011-09	7722-009	J00119	U	0.394
R211011-10	7722-010	J00120	U	0.108
R211011-11	7722-011	J00121	U	0.108
R211011-12	7722-012	J00122	U	U
R211011-13	7722-013	J00123	U	U
R211011-14	7722-014	J00124	U	0.072 J
R211011-15	7722-015	J00125	U	U
R211011-16	7722-016	J00126	U	U
R211011-17	7722-017	J00127	U	0.885
R211011-18	7722-018	J00128	U	U
R211011-19	7722-019	J00129	U	1.74
R211011-20	7722-020	J00130	U	0.166
R211011-21	7722-021	J00131	U	0.127
R211011-22	7722-022	J00132	U	0.129
R211011-23	7722-023	J00133	U	0.390
R211011-24	7722-024	J00134	U	U
R211011-25	7722-025	BLK (QC ID=43117)	U	U

Nominal values and limits from method RDLs (pCi/g) 0.050 0.10
100 F Area - Quick Turn

METHOD SUMMARIES

Page 1

SUMMARY DATA SECTION

Page 34

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 11/14/02

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP H1952

Test GAM Matrix SOLID
SDG 7722
Contact Melissa C. Mannion

LAB METHOD SUMMARY

GAMMA SCAN
GAMMA SPECTROSCOPY

Client Hanford
Contract No. 630
Contract SDG H1952

METHOD PERFORMANCE

LAB	RAW	SUF-	MDA	ALIQ	PREP	DILU-	YIELD	EFF	COUNT	FWHM	DRIFT	DAYS	ANAL-		
SAMPLE ID	TEST FIX	CLIENT SAMPLE ID	pCi/g	g	FAC	TION	%	%	min	keV	KeV	HELD	PREPARED	YZED	DETECTOR
Preparation batch 7032-071 2σ prep error 15.0 % Reference Lab Notebook 7024 pg. 071															
R211011-01		J00111	<u>0.10</u>	836					<u>31</u>			9	11/13/02	11/13	02,01,00
R211011-02		J00112	<u>0.057</u>	944					<u>31</u>			9	11/13/02	11/13	MB,07,00
R211011-03		J00113	<u>0.089</u>	822					<u>31</u>			9	11/13/02	11/13	02,03,00
R211011-04		J00114	<u>0.055</u>	920					<u>31</u>			9	11/13/02	11/13	02,04,00
R211011-05		J00115	<u>0.058</u>	944					<u>31</u>			9	11/13/02	11/13	MB,05,00
R211011-06		J00116	<u>0.16</u>	823					<u>31</u>			9	11/13/02	11/13	02,01,00
R211011-07		J00117	<u>0.057</u>	870					<u>31</u>			9	11/13/02	11/13	MB,07,00
R211011-08		J00118	<u>0.081</u>	894					<u>31</u>			9	11/13/02	11/13	02,03,00
R211011-09		J00119	<u>0.058</u>	852					<u>31</u>			9	11/13/02	11/13	02,04,00
R211011-10		J00120	<u>0.067</u>	938					<u>31</u>			9	11/13/02	11/13	MB,05,00
R211011-11		J00121	<u>0.087</u>	852					<u>31</u>			9	11/13/02	11/13	02,01,00
R211011-12		J00122	<u>0.065</u>	888					<u>31</u>			9	11/13/02	11/13	MB,07,00
R211011-13		J00123	<u>0.071</u>	925					<u>31</u>			9	11/13/02	11/13	02,03,00
R211011-14		J00124	<u>0.066</u>	778					<u>31</u>			9	11/13/02	11/13	02,04,00
R211011-15		J00125	<u>0.060</u>	898					<u>31</u>			9	11/13/02	11/13	MB,05,00
R211011-16		J00126	<u>0.11</u>	765					<u>31</u>			9	11/13/02	11/13	02,01,00
R211011-17		J00127	<u>0.063</u>	926					<u>31</u>			9	11/13/02	11/13	MB,07,00
R211011-18		J00128	<u>0.12</u>	822					<u>31</u>			9	11/13/02	11/13	02,03,00
R211011-19		J00129	<u>0.076</u>	802					<u>31</u>			9	11/13/02	11/13	02,04,00
R211011-20		J00130	<u>0.067</u>	727					<u>31</u>			9	11/13/02	11/13	MB,05,00
R211011-21		J00131	<u>0.056</u>	822					<u>92</u>			9	11/13/02	11/13	02,01,00
R211011-22		J00132	0.030	927					<u>93</u>			9	11/13/02	11/13	MB,07,00
R211011-23		J00133	<u>0.067</u>	639					<u>92</u>			9	11/13/02	11/13	02,03,00
R211011-24		J00134	0.039	744					<u>92</u>			9	11/13/02	11/13	02,04,00
R211011-25		BLK (QC ID=43117)	0.026	639					<u>93</u>				11/13/02	11/13	MB,05,00
Nominal values and limits from method			0.050	639					100			180			

PROCEDURES REFERENCE GAMMA_GS
CP-100 Ge(Li) Preparation for Commercial Samples, rev 5

AVERAGES ± 2 SD MDA 0.071 ± 0.057
FOR 25 SAMPLES YIELD _____ ± _____

METHOD SUMMARIES

Page 2

SUMMARY DATA SECTION

Page 35

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 11/14/02

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H1952

SDG 7722
Contact Melissa C. Mannion

REPORT GUIDE

Client Hanford
Contract No. 630
Case no SDG_H1952

SAMPLE SUMMARY

The Sample and QC Summary Reports show all samples, including QC samples, reported in one Sample Delivery Group (SDG).

The Sample Summary Report fully identifies client samples and gives the corresponding lab sample identification. The QC Summary Report shows at the sample level how the lab organized the samples into batches and generated QC samples. The Preparation Batch and Method Summary Reports show this at the analysis level.

The following notes apply to these reports:

- * LAB SAMPLE ID is the lab's primary identification for a sample.
- * DEPARTMENT SAMPLE ID is an alternate lab id, for example one assigned by a radiochemistry department in a lab.
- * CLIENT SAMPLE ID is the client's primary identification for a sample. It includes any sample preparation done by the client that is necessary to identify the sample.
- * QC BATCH is a lab assigned code that groups samples to be processed and QCed together. These samples should have similar matrices.

QC BATCH is not necessarily the same as SDG, which reflects samples received and reported together.

- * All Lab Control Samples, Method Blanks, Duplicates and Matrix Spikes are shown that QC any of the samples. Due to possible reanalyses, not all results for all these QC samples may be relevant to the SDG. The Lab Control Sample, Method Blank, Duplicate, Matrix Spike and Method Summary Reports detail these relationships.

REPORT GUIDES

Page 1

SUMMARY DATA SECTION

Page 36

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 11/14/02

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H1952

SDG 7722
Contact Melissa C. Mannion

REPORT GUIDE

Client Hanford
Contract No. 630
Case no SDG_H1952

PREPARATION BATCH SUMMARY

The Preparation Batch Summary Report shows all preparation batches in one Sample Delivery Group (SDG) with information necessary to check the completeness and consistency of the SDG.

The following notes apply to this report:

- * The preparation batches are shown in the same order as the Method Summary Reports are printed.
- * Only analyses of planchets relevant to the SDG are included.
- * Each preparation batch should have at least one Method Blank and LCS in it to validate client sample results.
- * The QUALIFIERS shown are all qualifiers other than U, J, B, L and H that occur on any analysis in the preparation batch. The Method Summary Report has these qualifiers on a per sample basis.

These qualifiers should be reviewed as follows:

- X Some data has been manually entered or modified. Transcription errors are possible.
- P One or more results are 'preliminary'. The data is not ready for final reporting.
- 2 There were two or more results for one analyte on one planchet imported at one time. The results in DVD may not be the same as on the raw data sheets.

Other lab defined qualifiers may occur. In general, these should be addressed in the SDG narrative.

REPORT GUIDES

Page 2

SUMMARY DATA SECTION

Page 37

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 11/14/02

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H1952

SDG 7722
Contact Melissa C. Mannion

REPORT GUIDE

Client Hanford
Contract No. 630
Case no SDG H1952

WORK SUMMARY

The Work Summary Report shows all samples, including QC samples, and all relevant analyses in one Sample Delivery Group (SDG). This report is often useful as supporting documentation for an invoice.

The following notes apply to this report:

- * TEST is a code for the method used to measure associated analytes. Results and related information for each analyte are on the Data Sheet Report. In special cases, a test code used in the summary data section is not the same as in associated raw data. In this case, both codes are shown on the Work Summary.
- * SUFFIX is the lab's code to distinguish multiple analyses (recounts, reworks, reanalyses) of a fraction of the sample. The suffix indicates which result is being reported. An empty suffix normally identifies the first attempt to analyze the sample.
- * The LAB SAMPLE ID, TEST and SUFFIX uniquely identify all supporting data for a result. The Method Summary Report for each TEST has method performance data, such as yield, for each lab sample id and suffix and procedures used in the method.
- * PLANCHET is an alternate lab identifier for work done for one test. It, combined with the TEST and SUFFIX, may be the best link to raw data.
- * For QC samples, only analyses that directly QC some regular sample are shown. The Lab Control Sample, Method Blank, Duplicate, Matrix Spike and Method Summary Reports detail these relationships.
- * The SAS (Special Analytical Services) Number is a client or lab assigned code that reflects special processing for samples, such as rapid turn around. Counts of tests done are lists by SAS number since it is likely to affect prices.

REPORT GUIDES

Page 3

SUMMARY DATA SECTION

Page 38

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 11/14/02

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H1952

SDG 7722
Contact Melissa C. Mannion

REPORT GUIDE

Client Hanford
Contract No. 630
Case no SDG H1952

DATA SHEET

The Data Sheet Report shows all results and primary supporting information for one client sample or Method Blank. This report corresponds to both the CLP Inorganics and Organics Data Sheet.

The following notes apply to this report:

- * TEST is a code for the method used to measure an analyte. If the TEST is empty, no data is available; the analyte was not analyzed for.
- * The LAB SAMPLE ID and TEST uniquely identify work within the Summary Data Section of a Data Package. The Work Summary and Method Summary Reports further identify raw data that underlies this work.

The Method Summary Report for each TEST has method performance data, such as yield, for each Lab Sample ID and a list of procedures used in the method.

- * ERRORS can be labeled TOTAL or COUNT. TOTAL implies a preparation (non-counting method) error has been added, as square root of sum of squares, to the counting error denoted by COUNT. The preparation errors, which may vary by preparation batch, are shown on the Method Summary Report.
- * A RESULT can be 'N.R.' (Not Reported). This means the lab did this work but chooses not to report it now, possibly because it was reported at another time.
- * When reporting a Method Blank, a RESULT can be 'N.A.' (Not Applicable). This means there is no reported client sample work in the same preparation batch as the Blank's result. This is likely to occur when the Method Blank is associated with reanalyses of selected work for a few samples in the SDG.

The following qualifiers are defined by the DVD system:

- U The RESULT is less than the MDA (Minimum Detectable Activity).

REPORT GUIDES

Page 4

SUMMARY DATA SECTION

Page 39

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 11/14/02

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H1952

SDG 7722
Contact Melissa C. Mannion

GUIDE , cont .

Client Hanford
Contract No. 630
Case no SDG H1952

DATA SHEET

If the MDA is blank, the ERROR is used as the limit.

- J The RESULT is less than the RDL (Required Detection Limit) and no U qualifier is assigned.
 - B A Method Blank associated with this sample had a result without a U flag and, after correcting for possibly different aliquots, that result is greater than or equal to the MDA for this sample.
- Normally, B is not assigned if U is. When method blank subtraction is shown on this report, B flags are assigned based on the unsubtracted values while U's are assigned based on the subtracted ones. Both flags can be assigned in this case.
- For each sample result, all Method Blank results in the same preparation batch are compared. The Method Summary Report documents this and other QC relationships.
- L Some Lab Control Sample that QC's this sample had a low recovery. The lab can disable assignment of this qualifier.
 - H Similar to 'L' except the recovery was high.
 - P The RESULT is 'preliminary'.
 - X Some data necessary to compute the RESULT, ERROR or MDA was manually entered or modified.
 - 2 There were two or more results available for this analyte. The reported result may not be the same as in the raw data.

Other qualifiers are lab defined. Definitions should be in the SDG narrative.

The following values are underlined to indicate possible problems:

- * An MDA is underlined if it is bigger than its RDL.

REPORT GUIDES

Page 5

SUMMARY DATA SECTION

Page 40

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 11/14/02

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H1952

SDG 7722
Contact Melissa C. Mannion

GUIDE, cont.

Client Hanford
Contract No. 630
Case no SDG H1952

DATA SHEET

- * An ERROR is underlined if the 1.645 sigma counting error is bigger than both the MDA and the RESULT, implying that the MDA may not be a good estimate of the 'real' minimum detectable activity.
- * A negative RESULT is underlined if it is less than the negative of its 2 sigma counting ERROR.
- * When reporting a Method Blank, a RESULT is underlined if greater than its MDA. If the MDA is blank, the 2 sigma counting error is used in the comparison.

REPORT GUIDES

Page 6

SUMMARY DATA SECTION

Page 41

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 11/14/02

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H1952

SDG 7722
Contact Melissa C. Mannion

REPORT GUIDE

Client Hanford
Contract No. 630
Case no SDG H1952

LAB CONTROL SAMPLE

The Lab Control Sample Report shows all results, recoveries and primary supporting information for one Lab Control Sample.

The following notes apply to this report:

- * All fields in common with the Data Sheet Report have similar usage. Refer to its Report Guide for details.
- * An amount ADDED is the lab's value for the actual amount spiked into this sample with its ERROR an estimate of the error of this amount.

An amount added is underlined if its ratio to the corresponding RDL is outside protocol specified limits.

- * REC (Recovery) is RESULT divided by ADDED expressed as a percent.
- * The first, computed limits for the recovery reflect:
 1. The error of RESULT, including that introduced by rounding the result prior to printing.

If the limits are labeled (TOTAL), they include preparation error in the result. If labeled (COUNT), they do not.
 2. The error of ADDED.
 3. A lab specified, per analyte bias. The bias changes the center of the computed limits.
- * The second limits are protocol defined upper and lower QC limits for the recovery.
- * The recovery is underlined if it is outside either of these ranges.

REPORT GUIDES

Page 7

SUMMARY DATA SECTION

Page 42

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 11/14/02

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H1952

SDG 7722
Contact Melissa C. Mannion

REPORT GUIDE

Client Hanford
Contract No. 630
Case no SDG_H1952

DUPLICATE

The Duplicate Report shows all results, differences and primary supporting information for one Duplicate and associated Original sample.

The following notes apply to this report:

- * All fields in common with the Data Sheet Report have similar usage. This applies both to the Duplicate and Original sample data. Refer to the Data Sheet Report Guide for details.

If the Duplicate has data for a TEST and the lab did not do this test to the Original, the Original's RESULTS are underlined.

- * The RPD (Relative Percent Difference) is the absolute value of the difference of the RESULTS divided by their average expressed as a percent.

If both RESULTS are less than their MDAs, no RPD is computed and a '-' is printed.

For an analyte, if the lab did work for both samples but has data for only one, the MDA from the sample with data is used as the other's result in the RPD.

- * The first, computed limit is the sum, as square root of sum of squares, of the errors of the results divided by the average result as a percent, hence the relative error of the difference rather than the error of the relative difference. The errors include those introduced by rounding the RESULTS prior to printing.

If this limit is labeled TOT, it includes the preparation error in the RESULTS. If labeled CNT, it does not.

This value reported for this limit is at most 999.

- * The second limit for the RPD is the larger of:

1. A fixed percentage specified in the protocol.

REPORT GUIDES

Page 8

SUMMARY DATA SECTION

Page 43

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 11/14/02

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H1952

SDG 7722
Contact Melissa C. Mannion

GUIDE, cont.

Client Hanford
Contract No. 630
Case no SDG H1952

DUPLICATE

2. A protocol factor (typically 2) times the average MDA as a percent of the average result. This limit applies when the results are close to the MDAs.

- * The RPD is underlined if it is greater than either limit.
- * If specified by the lab, the second limit column is replaced by the Difference Error Ratio (DER), which is the absolute value of the difference of the results divided by the quadratic sum of their one sigma errors, the same errors as used in the first limit.

Except for differences due to rounding, the DER is the same as the RPD divided by the first RPD limit with the limit scaled to 1 sigma.

- * The DER is underlined if it is greater than the sigma factor, typically 2 or 3, shown in the header for the first RPD limit.

REPORT GUIDES

Page 9

SUMMARY DATA SECTION

Page 44

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 11/14/02

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H1952

SDG 7722
Contact Melissa C. Mannion

REPORT GUIDE

Client Hanford
Contract No. 630
Case no SDG_H1952

MATRIX SPIKE

The Matrix Spike Report shows all results, recoveries and primary supporting information for one Matrix Spike and associated Original sample.

The following notes apply to this report:

- * All fields in common with the Data Sheet Report have similar usage. This applies both to the Spiked and Original sample data. Refer to the Data Sheet Report Guide for details.

If the Spike has data for a TEST and the lab did not do this test to the Original, the Original's RESULTS are underlined.

- * An amount ADDED is the lab's value for the actual amount spiked into the Spike sample with its ERROR an estimate of the error of this amount.

An amount is underlined if its ratio to the corresponding RDL is outside protocol specified limits.

- * REC (Recovery) is the Spike RESULT minus the Original RESULT divided by ADDED expressed as a percent.

- * The first, computed limits for the recovery reflect:

1. The errors of the two RESULTS, including those introduced by rounding them prior to printing.

If the limits are labeled (TOTAL), they include preparation error in the result. If labeled (COUNT), they do not.

2. The error of ADDED.

3. A lab specified, per analyte bias. The bias changes the center of the computed limits.

- * The second limits are protocol defined upper and lower QC limits

REPORT GUIDES

Page 10

SUMMARY DATA SECTION

Page 45

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 11/14/02

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H1952

SDG 7722
Contact Melissa C. Mannion

GUIDE, cont.

Client Hanford
Contract No. 630
Case no SDG_H1952

MATRIX SPIKE

for the recovery.

These limits are left blank if the Original RESULT is more than a protocol defined factor (typically 4) times ADDED. This is a way of accounting for that when the spike is small compared to the amount in the original sample, the recovery is unreliable.

- * The recovery is underlined (out of spec) if it is outside either of these ranges.

REPORT GUIDES

Page 11

SUMMARY DATA SECTION

Page 46

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 11/14/02

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H1952

SDG 7722
Contact Melissa C. Mannion

REPORT GUIDE

Client Hanford
Contract No. 630
Case no SDG H1952

METHOD SUMMARY

The Method Summary Report has two tables. One shows up to five results measured using one method. The other has performance data for the method. There is one report for each TEST, as used on the Data Sheet Report.

The following notes apply to this report:

- * Each table is subdivided into sections, one for each preparation batch. A preparation batch is a group of aliquots prepared at roughly the same time in one work area of the lab using the same method.

There should be Lab Control Sample and Method Blank results in each preparation batch since this close correspondence makes the QC meaningful. Depending on lab policy, Duplicates need not occur in each batch since they QC sample dependencies such as matrix effects.

- * The RAW TEST column shows the test code used in the raw data to identify a particular analysis if it is different than the test code in the header of the report. This occurs in special cases due to method specific details about how the lab labels work.

The Lab Sample or Planchet ID combined with the (Raw) Test Code and Suffix uniquely identify the raw data for each analysis.

- * If a result is less than both its MDA and RDL, it is replaced by just 'U' on this report. If it is greater than or equal to the RDL but less than the MDA, the result is shown with a 'U' flag.

The J and X flags are as on the data sheet.

- * Non-U results for Method Blanks are underlined to indicate possible contamination of other samples in the preparation batch. The Method Blank Report has supporting data.
- * Lab Control Sample and Matrix Spike results are shown as: ok, No data, LOW or HIGH, with the last two underlined. 'No data'

REPORT GUIDES

Page 12

SUMMARY DATA SECTION

Page 47

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 11/14/02

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H1952

SDG 7722
Contact Melissa C. Mannion

GUIDE , c o n t .

Client Hanford
Contract No. 630
Case no SDG_H1952

METHOD SUMMARY

means no amount ADDED was specified. 'LOW' and 'HIGH' correspond to when the recovery is underlined on the Lab Control Sample or Matrix Spike Report. See these reports for supporting data.

- * Duplicate sample results are shown as: ok, No data, or OUT, with the last two underlined. 'No data' means there was no original sample data found for this duplicate. 'OUT' corresponds to when the RPD is underlined on the Duplicate Report. See this report for supporting data.
- * If the MDA column is labeled 'MAX MDA', there was more than one result measured by the reported method and the MDA shown is the largest MDA. If not all these results have the same RDL, the MAX MDA reflects only those results with RDL equal to the smallest one.

MDAs are underlined if greater than the printed RDL.

- * Aliquots are underlined if less than the nominal value specified for the method.
- * Preparation factors are underlined if greater than the nominal value specified for the method.
- * Dilution factors are underlined if greater than the nominal value specified for the method.
- * Residues are underlined if outside the range specified for the method. Residues are not printed if yields are.
- * Yields, which may be gravimetric, radiometric or some type of recovery depending on the method, are underlined if outside the range specified for the method.
- * Efficiencies are underlined if outside the range specified for the method. Efficiencies are detector and geometry dependent so this test is only approximate.

REPORT GUIDES

Page 13

SUMMARY DATA SECTION

Page 48

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 11/14/02

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H1952

SDG 7722
Contact Melissa C. Mannion

GUIDE , c o n t .

Client Hanford
Contract No. 630
Case no SDG H1952

METHOD SUMMARY

- * Count times are underlined if less than the nominal value specified for the method.
- * Resolutions (as FWHM; Full Width at Half Max) are underlined if greater than the method specified limit.
- * Tracer drifts are underlined if their absolute values are greater than the method specified limit. Tracer drifts are not printed if percent moistures are.
- * Days Held are underlined if greater than the holding time specified in the protocol.
- * Analysis dates are underlined if before their planchet's preparation date or, if a limit is specified, too far after it.

For some methods, ratios as percentages and error estimates for them are computed for pairs of results. A ratio column header like '1+3' means the ratio of the first result column and the third result column.

Ratios are not computed for Lab Control Sample, Method Blank or Matrix Spike results since their matrices are not necessarily similar to client samples'.

The error estimate for a ratio of results from one planchet reflects only counting errors since other errors should be correlated. For a ratio involving different planchets, if QC limits are computed based on total errors, the error for the ratio allows for the preparation errors for the planchets.

The ratio is underlined (out of spec) if the absolute value of its difference from the nominal value is greater than its error estimate. If no nominal value is specified, this test is not done.

For Gross Alpha or Gross Beta results, there may be a column showing the sum of other Alpha or Beta emitters. This sum includes all relevant

REPORT GUIDES

Page 14

SUMMARY DATA SECTION

Page 49

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 11/14/02

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H1952

SDG 7722
Contact Melissa C. Mannion

GUIDE, cont.

Client Hanford
Contract No. 630
Case no SDG H1952

METHOD SUMMARY

results in the DVD database, whether reported or not. Results in the sum are weighted by a particles/decay value specified by the lab for each relevant analyte. Results less than their MDA are not included. No sums are computed for Lab Control, Method Blank or Matrix Spike samples since their various planchets may not be physically related.

If a ratio of total isotopic to Gross Alpha or Beta is shown, the error for the ratio reflects both the error in the Gross result and the sum, as square root of sum of squares, of the errors in the isotopic results.

For total elemental uranium or thorium results, there may be a column showing the total weight computed from associated isotopic results. Ignoring results less than their MDAs, this is a weighted sum of the isotopic results. The weights depend on the molecular weight and half-life of each isotope so as to convert activities (decays) to weight (atoms).

If a ratio of total computed to measured elemental uranium or thorium is shown, the error for the ratio reflects the errors in all the measurements.

REPORT GUIDES

Page 15

SUMMARY DATA SECTION

Page 50

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 11/14/02

Bechtel Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				B00-029-226		Page <u>1</u> of <u>5</u>	
Collector MT Stankovich / <i>F. H. Herg</i>		Company Contact Mike Stankovich		Telephone No. 531-7620		Project Coordinator TRENT, SJ		Price Code <i>2d</i> Data Turnaround	
Project Designation 100 F Area - Quick Turn		Sampling Location 116-F-6 <i>H1952 (7722)</i>		SAF No. B00-029		Air Quality <input type="checkbox"/> <i>7day.</i>			
Ice Chest No. <i>SML-441</i>		Field Logbook No. EI-1535-6		COA R116F62000		Method of Shipment FedEx			
Shipped To <u>(TMA) RECRA</u>		Offsite Property No. <i>A 30031</i>				Bill of Lading/Air Bill No. <i>79013334 3930</i>			
POSSIBLE SAMPLE HAZARDS/REMARKS Radioactive <i>Tic To 1004m1</i> Special Handling and/or Storage <i>None</i>					Preservation		None		
					Type of Container		Marinelli		
					No. of Container(s)		1		
					Volume		500mL		
SAMPLE ANALYSIS					See item (1) in Special Instructions.				
Sample No.	Matrix *	Sample Date	Sample Time						
J00111	SOIL	<i>11.4.02</i>	<i>0920</i>	<i>X</i>					
J00112	SOIL	<i>11.4.02</i>	<i>0923</i>	<i>X</i>					
J00113	SOIL	<i>11.4.02</i>	<i>0925</i>	<i>X</i>					
J00114	SOIL	<i>11.4.02</i>	<i>0927</i>	<i>X</i>					
J00115	SOIL	<i>11.4.02</i>	<i>0928</i>	<i>X</i>					
CHAIN OF POSSESSION					SPECIAL INSTRUCTIONS				
Relinquished By/Removed From <i>R. Fabberg R. Fabberg</i>		Date/Time <i>11.4.02 1400</i>		Received By/Stored In <i>R. Fabberg 1-B 3728</i>		Date/Time <i>11.4.02</i>		(1) Gamma Spectroscopy - Screen (Americium-241, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155) <i>R. Fabberg unavailable to relinquish for shipment to Lab on 11/5/02 @ 1015 DAS 11/5/02</i>	
Relinquished By/Removed From <i>3728 R. Fabberg 1-B</i>		Date/Time <i>11/5/02 1015</i>		Received By/Stored In <i>David St. John</i>		Date/Time <i>11/5/02 1015</i>			
Relinquished By/Removed From <i>David St. John ERE-AFS</i>		Date/Time <i>11/5/02 1015</i>		Received By/Stored In <i>FED EX</i>		Date/Time <i>11/5/02 1015</i>			
Relinquished By/Removed From <i>FED EX</i>		Date/Time <i>11/6/02 9:45</i>		Received By/Stored In <i>David St. John</i>		Date/Time <i>11/6/02 9:45</i>			
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time			
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time			
LABORATORY SECTION		Received By		Title		Date/Time		Matrix * S=Soil SS=Soil/Sediment SO=Solid SL=Sludge W=Water O=Oil A=Air DS=Drum Solids DL=Drum Liquids T=Timex WI=Wipe L=Liquid V=Vegetation X=Other	
FINAL SAMPLE DISPOSITION		Disposal Method		Disposed By		Date/Time			

Bechtel Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				B00-029-226		Page 2 of 5	
Collector MT Stankovich / <i>Fehlberg</i>		Company Contact Mike Stankovich		Telephone No. 531-7620		Project Coordinator TRENT, SJ		Price Code <i>2d</i> Data Turnaround	
Project Designation 100 F Area - Quick Turn		Sampling Location 116-F-6 <i>H1952 (7722)</i>		SAF No. B00-029		Air Quality <input type="checkbox"/> <i>7 day</i>			
Ice Chest No. <i>3mL-441</i>		Field Logbook No. EI-1535-6		COA R116F62000		Method of Shipment FedEx			
Shipped To (TMA) RECRA		Offsite Property No. <i>4030031</i>		Bill of Lading/Air Bill No. <i>790133343930</i>					
POSSIBLE SAMPLE HAZARDS/REMARKS Radioactive <i>Tie to J004M1</i> Special Handling and/or Storage <i>None</i>				Preservation		None			
				Type of Container		Marinelli			
				No. of Container(s)		1			
				Volume		500mL			
SAMPLE ANALYSIS				See item (1) in Special Instructions.					
Sample No.		Matrix *		Sample Date		Sample Time			
J00116		SOIL		<i>11.4.02</i>		<i>0931</i>		<i>X</i>	
J00117		SOIL		<i>11.4.02</i>		<i>0934</i>		<i>X</i>	
J00118		SOIL		<i>11.4.02</i>		<i>0937</i>		<i>X</i>	
J00119		SOIL		<i>11.4.02</i>		<i>0941</i>		<i>X</i>	
J00120		SOIL		<i>11.4.02</i>		<i>1003</i>		<i>X</i>	
CHAIN OF POSSESSION				SPECIAL INSTRUCTIONS				Matrix *	
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time		(1) Gamma Spectroscopy - Screen (Americium-241, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155) <i>R Fehlberg unavailable to relinquish for shipment to lab on 11/5/02 @ 1015 DAS 11/5/02</i>	
<i>K. Fehlberg</i>		<i>11.4.02 1400</i>		<i>Ref 1-B 3728</i>		<i>11.4.02</i>			
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time			
<i>3728 Ref 1-B</i>		<i>11/5/02 1015</i>		<i>David Stankovich</i>		<i>11/5/02 1015</i>			
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time			
<i>David Stankovich</i>		<i>11/5/02 1015</i>		<i>FED EX</i>		<i>11/5/02 1015</i>			
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time			
<i>FED EX</i>		<i>11/6/02 9:45</i>		<i>David Stankovich</i>		<i>11/6/02 9:45</i>			
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time			
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time			
LABORATORY SECTION		Received By		Title		Date/Time			
FINAL SAMPLE DISPOSITION		Disposal Method		Disposed By		Date/Time			

Bechtel Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				B00-029-226		Page <u>3</u> of <u>5</u>	
Collector MT Stankovich / <u>Fahlberg</u>		Company Contact Mike Stankovich		Telephone No. 531-7620		Project Coordinator TRENT, SJ		Price Code <u>2d</u> Data Turnaround	
Project Designation 100 F Area - Quick Turn		Sampling Location 116-F-6 <u>H1952 (7722)</u>		SAF No. B00-029		Air Quality <input type="checkbox"/>		<u>7 day</u>	
Ice Chest No. <u>SML-441</u>		Field Logbook No. EI-1535-6		COA R116F62000		Method of Shipment FedEx			
Shipped To <u>TMA/RECRA</u>		Offsite Property No. <u>A030031</u>		Bill of Lading/Air Bill No. <u>790133343930</u>					
POSSIBLE SAMPLE HAZARDS/REMARKS Radioactive <u>Tie To J004M1</u> Special Handling and/or Storage <u>None</u>				Preservation		None			
				Type of Container		Marinelli			
				No. of Container(s)		1			
				Volume		500mL			
SAMPLE ANALYSIS				See item (1) in Special Instructions.					
Sample No.		Matrix *		Sample Date		Sample Time			
J00121		SOIL		11.4.02		1007		X	
J00122		SOIL		11.4.02		1010		X	
J00123		SOIL		11.4.02		1013		X	
J00124		SOIL		11.4.02		1015		X	
J00125		SOIL		11.4.02		1018		X	
CHAIN OF POSSESSION				SPECIAL INSTRUCTIONS				Matrix * S=Soil SE=Sediment SO=Solid SL=Sludge W=Water O=Oil A=Air DS=Drum Solids DL=Drum Liquids T=Thane WL=Wipe L=Liquid V=Vegetation X=Other	
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time			
<u>R. Fahlberg</u>		<u>11/4/02 1400</u>		<u>R. Fahlberg</u>		<u>11/4/02 1400</u>			
<u>3728 Refrig 1B</u>		<u>11/5/02 1015</u>		<u>David St. John</u>		<u>11/5/02 1015</u>			
<u>David St. John</u>		<u>11/5/02 1015</u>		<u>FED EX</u>		<u>11/5/02 1015</u>			
<u>FED EX</u>		<u>11/6/02 9:45</u>		<u>David St. John</u>		<u>11/6/02 9:45</u>			
								<u>R Fahlberg unavailable to relinquish for shipment to lab on 11/5/02 @ 1015 DTS 11/5/02</u>	
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time			
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time			
LABORATORY SECTION		Received By		Title				Date/Time	
FINAL SAMPLE DISPOSITION		Disposal Method		Disposed By				Date/Time	

Bechtel Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				B00-029-226		Page <u>4</u> of <u>5</u>							
Collector MT Stankovich / <i>Fahlberg</i>		Company Contact Mike Stankovich		Telephone No. 531-7620		Project Coordinator TRENT, SJ		Price Code <u>2d</u> Data Turnaround							
Project Designation 100 F Area - Quick Turn		Sampling Location 116-F-6		<u>H1952 (7722)</u>		SAF No. B00-029		Air Quality <input type="checkbox"/> <u>7 day</u>							
Ice Chest No. <u>SML-441</u>		Field Logbook No. EI-1535-6		COA R116F62000		Method of Shipment FedEx									
Shipped To <u>CTMA/RECRA</u>		Offsite Property No. <u>A030031</u>		Bill of Lading/Air Bill No. <u>7901 3334 3930</u>											
POSSIBLE SAMPLE HAZARDS/REMARKS <i>Radioactive Tie To J004m1</i> Special Handling and/or Storage <i>None</i>				Preservation	None										
				Type of Container	Marinelli										
				No. of Container(s)	1										
				Volume	500mL										
SAMPLE ANALYSIS				See item (1) in Special Instructions.											
Sample No.	Matrix *	Sample Date	Sample Time												
J00126	SOIL	<u>11.4.02</u>	<u>1020</u>	<u>X</u>											
J00127	SOIL	<u>11.4.02</u>	<u>1022</u>	<u>X</u>											
J00128	SOIL	<u>11.4.02</u>	<u>1025</u>	<u>X</u>											
J00129	SOIL	<u>11.4.02</u>	<u>1028</u>	<u>X</u>											
J00130	SOIL	<u>11.4.02</u>	<u>1031</u>	<u>X</u>											
CHAIN OF POSSESSION				Sign/Print Names				SPECIAL INSTRUCTIONS				Matrix *			
Relinquished By/Removed From		Date/Time <u>1400</u>		Received By/Stored In		Date/Time <u>1400</u>		(1) Gamma Spectroscopy - Screen (Americium-241, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155) <i>R. Fahlberg unavailable to relinquish for shipment to lab on 11/5/02 @ 1015 DAS 11/5/02</i>				S=Soil SE=Settlement SO=Solid SL=Sludge W=Water O=Oil A=Air DS=Dry Solids DL=Dry Liquids T=Time WI=Wipe L=Liquid V=Vegetation X=Other			
<i>R. Fahlberg</i>		<u>11.4.02</u>		<i>Ref 1B 3728</i>		<u>11.4.02</u>									
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time									
<i>3728 Ref 1B</i>		<u>11/5/02 1015</u>		<i>David St. John</i>		<u>11/5/02 1015</u>									
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time									
<i>David St. John</i>		<u>11/5/02 1015</u>		<i>FED EX</i>		<u>11/5/02 1015</u>									
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time									
<i>FED EX</i>		<u>11/6/02 9:45</u>		<i>David St. John</i>		<u>11/6/02</u>									
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time									
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time									
LABORATORY SECTION		Received By		Title				Date/Time							
FINAL SAMPLE DISPOSITION		Disposal Method		Disposed By				Date/Time							

Bechtel Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				B00-029-226 Page <u>5</u> of <u>5</u>																																																																									
Collector MT Stankovich <i>Fellhere</i>		Company Contact Mike Stankovich		Telephone No. 531-7620		Project Coordinator TRENT, SJ																																																																									
Project Designation 100 F Area - Quick Turn		Sampling Location 116-F-6 <i>H1952 (7722)</i>		SAF No. B00-029		Price Code <i>2d</i> Data Turnaround <i>7 day</i>																																																																									
Ice Chest No. <i>SML-441</i>		Field Logbook No. EL-1535-6		COA R116F62000		Method of Shipment FedEx																																																																									
Shipped To <i>(TMA) RECRA</i>		Offsite Property No. <i>A030031</i>		Bill of Lading/Air Bill No. <i>790133343930</i>																																																																											
POSSIBLE SAMPLE HAZARDS/REMARKS Radioactive <i>Tie To 1004m1</i> Special Handling and/or Storage <i>None</i>				<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td>Preservation</td> <td>None</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>Type of Container</td> <td>Marinelli</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>No. of Container(s)</td> <td>1</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>Volume</td> <td>500mL</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> </table>				Preservation	None																	Type of Container	Marinelli																	No. of Container(s)	1																	Volume	500mL																
Preservation	None																																																																														
Type of Container	Marinelli																																																																														
No. of Container(s)	1																																																																														
Volume	500mL																																																																														
SAMPLE ANALYSIS				See item (1) in Special Instructions.																																																																											
Sample No.				Matrix *		Sample Date		Sample Time																																																																							
<i>J00131</i>				<i>SOIL</i>		<i>11.4.02</i>		<i>1033</i>		<i>X</i>																																																																					
<i>J00132</i>				<i>SOIL</i>		<i>11.4.02</i>		<i>1035</i>		<i>X</i>																																																																					
<i>J00133</i>				<i>SOIL</i>		<i>11.4.02</i>		<i>1037</i>		<i>X</i>																																																																					
<i>J00134</i>				<i>SOIL</i>		<i>11.4.02</i>		<i>1040</i>		<i>X</i>																																																																					
CHAIN OF POSSESSION				Sign/Print Names				SPECIAL INSTRUCTIONS								Matrix *																																																															
Relinquished By/Removed From <i>R. Fellhere</i>				Date/Time <i>11.4.02</i>				Received By/Stored In <i>R. B. 3728</i>				Date/Time <i>11.4.02</i>				(1) Gamma Spectroscopy - Screen (Americium-241, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155) S=Soil SE=Settlement SO=Solid SL=Sediment W=Water O=Oil A=Air DS=Drum Solids DL=Drum Liquids T=Thane WT=Wipe L=Liquid V=Vegetation X=Other																																																															
Relinquished By/Removed From <i>3728 R. Fellhere</i>				Date/Time <i>11/5/02 1015</i>				Received By/Stored In <i>David S. Johnson</i>				Date/Time <i>11/5/02 1015</i>																																																																			
Relinquished By/Removed From <i>David S. Johnson</i>				Date/Time <i>11/5/02 1015</i>				Received By/Stored In <i>FED EX</i>				Date/Time <i>11/5/02 1015</i>																																																																			
Relinquished By/Removed From <i>FED EX</i>				Date/Time <i>11/6/02 9:45</i>				Received By/Stored In <i>David S. Johnson</i>				Date/Time <i>11/6/02 9:45</i>																																																																			
Relinquished By/Removed From				Date/Time				Received By/Stored In				Date/Time																																																																			
Relinquished By/Removed From				Date/Time				Received By/Stored In				Date/Time																																																																			
Relinquished By/Removed From				Date/Time				Received By/Stored In				Date/Time																																																																			
LABORATORY SECTION		Received By		Title										Date/Time																																																																	
FINAL SAMPLE DISPOSITION		Disposal Method		Disposed By										Date/Time																																																																	

7 Day Push

Richmond, CA Laboratory

SAMPLE RECEIPT CHECKLIST

SAMPLE RECEIPT

Client: Fluor Hanford Date/Time received 11/6/02 9:45 am

CoC No. B00-029-226

Container I.D. No. SML 441 Requested TAT (Days) 7 P.O. Received Yes [] No []

INSPECTION

1. Custody seals on shipping container intact? Yes [X] No [] N/A []
2. Custody seals on shipping container dated & signed? Yes [✓] No [] N/A []
3. Custody seals on sample containers intact? Yes [X] No [] N/A []
4. Custody seals on sample containers dated & signed? Yes [X] No [] N/A []
5. Packing material is: Wet [] Dry [X]
6. Number of samples in shipping container: 24
7. Number of containers per sample: 1 (Or see CoC _____)
8. Paperwork agrees with samples? Yes [X] No []
9. Samples have: Tape [] Hazard labels [] Rad labels [] Appropriate sample labels [X]
10. Samples are: In good condition [X] Leaking [] Broken Container [] Missing []
11. Describe any anomalies: _____

13. Was P.M. notified of any anomalies? Yes [] No [] Date _____
14. Received by And. J. [Signature] Date: _____ Time: _____

Customer Sample
No.

срп

mr/hr

wipe

Customer Sample
No. .

cpm

-mr/hr

wipe

Ion Chamber Ser. No. _____

Calibration date _____

Alpha meter Ser. No. _____

Calibration date _____

Survey Meter Ser. No. _____

Calibration date _____

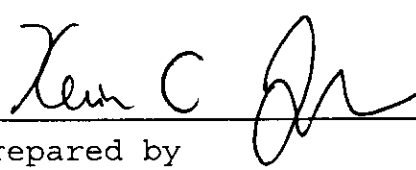
EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H1952

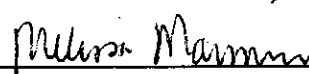
SDG 7723
Contact Melissa C. Mannion

Client Hanford
Contract No. 630
Case no SDG_H1952

S U M M A R Y D A T A S E C T I O N

T A B L E O F C O N T E N T S					
About this section	.	.	.	.	1
Sample Summaries	.	.	.	.	3
Prep Batch Summary	.	.	.	.	5
Work Summary	.	.	.	.	6
Method Blanks	.	.	.	.	9
Data Sheets	.	.	.	.	10
Method Summaries	.	.	.	.	34
Report Guides	.	.	.	.	36
End of Section	.	.	.	.	50


Prepared by


Reviewed by

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-TOC
Version 3.06
Report date 11/14/02

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H1952

SDG 7723
Contact Melissa C. Mannion

REPORT GUIDE

Client Hanford
Contract No. 630
Case no SDG H1952

ABOUT THE DATA SUMMARY SECTION

The Data Summary Section of a Data Package has all data, in several useful orders, necessary for first level, routine review of the data package for a Sample Delivery Group (SDG). This section follows the Data Package Narrative, which has an overview of the data package and a discussion of special problems. It is followed by the Raw Data Section, which has full details.

The Data Summary Section has several groups of reports:

SAMPLE SUMMARIES

The Sample and QC Summary Reports show all samples, including QC samples, reported in one SDG. These reports cross-reference client and lab sample identifiers.

PREPARATION BATCH SUMMARY

The Preparation Batch Summary Report shows all preparation batches (lab groupings reflecting how work was organized) relevant to the reported SDG with information necessary to check the completeness and consistency of the SDG.

WORK SUMMARY

The Work Summary Report shows all samples and work done on them relevant to the reported SDG.

METHOD BLANKS

The Method Blank Reports, one for each Method Blank relevant to the SDG, show all results and primary supporting information for the blanks.

LAB CONTROL SAMPLES

The Lab Control Sample Reports, one for each Lab Control Sample relevant to the SDG, show all results, recoveries and primary supporting information for these QC samples.

REPORT GUIDES

Page 1

SUMMARY DATA SECTION

Page 1

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 11/14/02

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H1952

SDG 7723
Contact Melissa C. Mannion

GUIDE , c o n t .

Client Hanford
Contract No. 630
Case no SDG H1952

ABOUT THE DATA SUMMARY SECTION

DUPLICATES

The Duplicate Reports, one for each Duplicate and Original sample pair relevant to the SDG, show all results, differences and primary supporting information for these QC samples.

MATRIX SPIKES

The Matrix Spike Reports, one for each Spiked and Original sample pair relevant to the SDG, show all results, recoveries and primary supporting information for these QC samples.

DATA SHEETS

The Data Sheet Reports, one for each client sample in the SDG, show all results and primary supporting information for these samples.

METHOD SUMMARIES

The Method Summary Reports, one for each test used in the SDG, show all results, QC and method performance data for one analyte on one or two pages. (A test is a short code for the method used to do certain work to the client's specification.)

REPORT GUIDES

The Report Guides, one for each of the above groups of reports, have documentation on how to read the associated reports.

REPORT GUIDES

Page 2

SUMMARY DATA SECTION

Page 2

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 11/14/02

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP H1952

SDG 7723

Contact Melissa C. Mannion

LAB SAMPLE SUMMARY

Client Hanford

Contract No. 630

Case no SDG H1952

LAB							CHAIN OF	
SAMPLE ID	CLIENT SAMPLE ID	LOCATION	MATRIX	LEVEL	SAF NO	CUSTODY	COLLECTED	
R211012-01	J00831	116-F-6	SOLID		B00-029	B00-029-238	10/31/02 08:20	
R211012-02	J00832	116-F-6	SOLID		B00-029	B00-029-238	10/31/02 08:22	
R211012-03	J00833	116-F-6	SOLID		B00-029	B00-029-238	10/31/02 08:24	
R211012-04	J00834	116-F-6	SOLID		B00-029	B00-029-238	10/31/02 08:26	
R211012-05	J00835	116-F-6	SOLID		B00-029	B00-029-238	10/31/02 08:28	
R211012-06	J00836	116-F-6	SOLID		B00-029	B00-029-238	10/31/02 08:30	
R211012-07	J00837	116-F-6	SOLID		B00-029	B00-029-238	10/31/02 08:33	
R211012-08	J00838	116-F-6	SOLID		B00-029	B00-029-238	10/31/02 08:35	
R211012-09	J00839	116-F-6	SOLID		B00-029	B00-029-238	10/31/02 08:37	
R211012-10	J00840	116-F-6	SOLID		B00-029	B00-029-238	10/31/02 08:39	
R211012-11	J00841	116-F-6	SOLID		B00-029	B00-029-238	10/31/02 08:41	
R211012-12	J00842	116-F-6	SOLID		B00-029	B00-029-238	10/31/02 08:43	
R211012-13	J00843	116-F-6	SOLID		B00-029	B00-029-238	10/31/02 08:46	
R211012-14	J00844	116-F-6	SOLID		B00-029	B00-029-238	10/31/02 08:48	
R211012-15	J00845	116-F-6	SOLID		B00-029	B00-029-238	10/31/02 08:50	
R211012-16	J00846	116-F-6	SOLID		B00-029	B00-029-238	10/31/02 08:52	
R211012-17	J00847	116-F-6	SOLID		B00-029	B00-029-238	10/31/02 08:54	
R211012-18	J00848	116-F-6	SOLID		B00-029	B00-029-238	10/31/02 08:56	
R211012-19	J00849	116-F-6	SOLID		B00-029	B00-029-238	10/31/02 08:59	
R211012-20	J00850	116-F-6	SOLID		B00-029	B00-029-238	10/31/02 09:01	
R211012-21	J00851	116-F-6	SOLID		B00-029	B00-029-238	10/31/02 09:03	
R211012-22	J00852	116-F-6	SOLID		B00-029	B00-029-238	10/31/02 09:05	
R211012-23	J00853	116-F-6	SOLID		B00-029	B00-029-238	10/31/02 09:07	
R211012-24	J00854	116-F-6	SOLID		B00-029	B00-029-238	10/31/02 09:09	
R211012-25	Method Blank		SOLID		B00-029			

LAB SUMMARY

Page 1

SUMMARY DATA SECTION

Page 3

Lab id EBRLNE

Protocol Hanford

Version Ver 1.0

Form DVD-LS

Version 3.06

Report date 11/14/02

EBERLINE SERVICES/RICHMOND
SAMPLE DELIVERY GROUP H1952

SDG 7723
Contact Melissa C. Mannion

QC SUMMARY

Client Hanford
Contract No. 630
Case no SDG H1952

QC BATCH	CHAIN OF CUSTODY	CLIENT SAMPLE ID	MATRIX	% SOLIDS	SAMPLE AMOUNT	BASIS AMOUNT	DAYS SINCE RECEIVED	LAB COLL	LAB SAMPLE ID	DEPARTMENT SAMPLE ID
7723	B00-029-238	J00831	SOLID	100.0	689.2 g		11/06/02	6	R211012-01	7723-001
		J00832	SOLID	100.0	725.7 g		11/06/02	6	R211012-02	7723-002
		J00833	SOLID	100.0	787.8 g		11/06/02	6	R211012-03	7723-003
		J00834	SOLID	100.0	726.7 g		11/06/02	6	R211012-04	7723-004
		J00835	SOLID	100.0	688.3 g		11/06/02	6	R211012-05	7723-005
		J00836	SOLID	100.0	639.8 g		11/06/02	6	R211012-06	7723-006
		J00837	SOLID	100.0	639.8 g		11/06/02	6	R211012-07	7723-007
		J00838	SOLID	100.0	700.6 g		11/06/02	6	R211012-08	7723-008
		J00839	SOLID	100.0	585.2 g		11/06/02	6	R211012-09	7723-009
		J00840	SOLID	100.0	746.6 g		11/06/02	6	R211012-10	7723-010
		J00841	SOLID	100.0	720.8 g		11/06/02	6	R211012-11	7723-011
		J00842	SOLID	100.0	565.0 g		11/06/02	6	R211012-12	7723-012
		J00843	SOLID	100.0	719.3 g		11/06/02	6	R211012-13	7723-013
		J00844	SOLID	100.0	747.8 g		11/06/02	6	R211012-14	7723-014
		J00845	SOLID	100.0	695.4 g		11/06/02	6	R211012-15	7723-015
		J00846	SOLID	100.0	574.8 g		11/06/02	6	R211012-16	7723-016
		J00847	SOLID	100.0	792.4 g		11/06/02	6	R211012-17	7723-017
		J00848	SOLID	100.0	749.4 g		11/06/02	6	R211012-18	7723-018
		J00849	SOLID	100.0	724.5 g		11/06/02	6	R211012-19	7723-019
		J00850	SOLID	100.0	663.1 g		11/06/02	6	R211012-20	7723-020
		J00851	SOLID	100.0	623.1 g		11/06/02	6	R211012-21	7723-021
		J00852	SOLID	100.0	592.9 g		11/06/02	6	R211012-22	7723-022
		J00853	SOLID	100.0	705.8 g		11/06/02	6	R211012-23	7723-023
		J00854	SOLID	100.0	522.5 g		11/06/02	6	R211012-24	7723-024
		Method Blank	SOLID						R211012-25	7723-025

QC SUMMARY

Page 1

SUMMARY DATA SECTION

Page 4

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-QS
Version 3.06
Report date 11/14/02

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP H1952

PREP BATCH SUMMARY

SDG 7723

Contact Melissa C. Mannion

Client Hanford

Contract No. 630

Case no SDG H1952

TEST	MATRIX	METHOD	PREPARATION	ERROR	PLANCHETS ANALYZED				QUALI-		
			BATCH	2σ %	CLIENT	MORE	RE	BLANK	LCS	DUP/ORIG	MS/ORIG	FIERS
Gamma Spectroscopy											
GAM	SOLID	Gamma Scan	7032-074	15.0	24			1			

Duplicates and Matrix Spikes are those with original (Client) sample in this Sample Delivery Group.

Blank and LCS planchets are those in the same preparation batch as some Client, Duplicate or Spike sample.

PREP BATCH SUMMARY

Page 1

SUMMARY DATA SECTION

Page 5

Lab id EBRLNE

Protocol Hanford

Version Ver 1.0

Form DVD-PBS

Version 3.06

Report date 11/14/02

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP H1952

LAB WORK SUMMARY

SDG 7723

Contact Melissa C. Mannion

Client Hanford

Contract No. 630

Case no SDG H1952

LAB SAMPLE	CLIENT SAMPLE ID									
COLLECTED	LOCATION	MATRIX			SUF-					
RECEIVED	CUSTODY	SAF No	PLANCHET	TEST	FIX	ANALYZED	REVIEWED	BY	METHOD	
R211012-01	J00831		7723-001	GAM		11/12/02	11/14/02	NJV	Gamma Scan	
10/31/02	116-F-6	SOLID								
11/06/02	B00-029-238	B00-029								
R211012-02	J00832		7723-002	GAM		11/12/02	11/14/02	NJV	Gamma Scan	
10/31/02	116-F-6	SOLID								
11/06/02	B00-029-238	B00-029								
R211012-03	J00833		7723-003	GAM		11/12/02	11/14/02	NJV	Gamma Scan	
10/31/02	116-F-6	SOLID								
11/06/02	B00-029-238	B00-029								
R211012-04	J00834		7723-004	GAM		11/12/02	11/14/02	NJV	Gamma Scan	
10/31/02	116-F-6	SOLID								
11/06/02	B00-029-238	B00-029								
R211012-05	J00835		7723-005	GAM		11/12/02	11/14/02	NJV	Gamma Scan	
10/31/02	116-F-6	SOLID								
11/06/02	B00-029-238	B00-029								
R211012-06	J00836		7723-006	GAM		11/12/02	11/14/02	NJV	Gamma Scan	
10/31/02	116-F-6	SOLID								
11/06/02	B00-029-238	B00-029								
R211012-07	J00837		7723-007	GAM		11/12/02	11/14/02	NJV	Gamma Scan	
10/31/02	116-F-6	SOLID								
11/06/02	B00-029-238	B00-029								
R211012-08	J00838		7723-008	GAM		11/12/02	11/14/02	NJV	Gamma Scan	
10/31/02	116-F-6	SOLID								
11/06/02	B00-029-238	B00-029								
R211012-09	J00839		7723-009	GAM		11/12/02	11/14/02	NJV	Gamma Scan	
10/31/02	116-F-6	SOLID								
11/06/02	B00-029-238	B00-029								
R211012-10	J00840		7723-010	GAM		11/12/02	11/14/02	NJV	Gamma Scan	
10/31/02	116-F-6	SOLID								
11/06/02	B00-029-238	B00-029								

WORK SUMMARY

Page 1

SUMMARY DATA SECTION

Page 6

Lab id EBRLNE

Protocol Hanford

Version Ver 1.0

Form DVD-LWS

Version 3.06

Report date 11/14/02

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP H1952

SDG 7723

Contact Melissa C. Mannion

WORK SUMMARY, cont.

Client Hanford

Contract No. 630

Case no SDG H1952

LAB SAMPLE COLLECTED RECEIVED	CLIENT SAMPLE ID LOCATION CUSTODY	SAF No	MATRIX	PLANCHET	TEST	SUF- FIX	ANALYZED	REVIEWED	BY	METHOD
R211012-11 10/31/02 11/06/02	J00841 116-F-6 B00-029-238	B00-029	SOLID	7723-011	GAM		11/12/02	11/14/02	NJV	Gamma Scan
R211012-12 10/31/02 11/06/02	J00842 116-F-6 B00-029-238	B00-029	SOLID	7723-012	GAM		11/12/02	11/14/02	NJV	Gamma Scan
R211012-13 10/31/02 11/06/02	J00843 116-F-6 B00-029-238	B00-029	SOLID	7723-013	GAM		11/12/02	11/14/02	NJV	Gamma Scan
R211012-14 10/31/02 11/06/02	J00844 116-F-6 B00-029-238	B00-029	SOLID	7723-014	GAM		11/12/02	11/14/02	NJV	Gamma Scan
R211012-15 10/31/02 11/06/02	J00845 116-F-6 B00-029-238	B00-029	SOLID	7723-015	GAM		11/12/02	11/14/02	NJV	Gamma Scan
R211012-16 10/31/02 11/06/02	J00846 116-F-6 B00-029-238	B00-029	SOLID	7723-016	GAM		11/12/02	11/14/02	NJV	Gamma Scan
R211012-17 10/31/02 11/06/02	J00847 116-F-6 B00-029-238	B00-029	SOLID	7723-017	GAM		11/12/02	11/14/02	NJV	Gamma Scan
R211012-18 10/31/02 11/06/02	J00848 116-F-6 B00-029-238	B00-029	SOLID	7723-018	GAM		11/12/02	11/14/02	NJV	Gamma Scan
R211012-19 10/31/02 11/06/02	J00849 116-F-6 B00-029-238	B00-029	SOLID	7723-019	GAM		11/12/02	11/14/02	NJV	Gamma Scan
R211012-20 10/31/02 11/06/02	J00850 116-F-6 B00-029-238	B00-029	SOLID	7723-020	GAM		11/12/02	11/14/02	NJV	Gamma Scan

WORK SUMMARY

Page 2

SUMMARY DATA SECTION

Page 7

Lab id EBRLNE

Protocol Hanford

Version Ver 1.0

Form DVD-LWS

Version 3.06

Report date 11/14/02

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP H1952

WORK SUMMARY, cont.

SDG 7723
Contact Melissa C. Mannion

Client Hanford
Contract No. 630
Case no SDG H1952

LAB SAMPLE COLLECTED RECEIVED	CLIENT SAMPLE ID LOCATION CUSTODY	MATRIX SAF No	PLANCHET	TEST	SUF- FIX	ANALYZED	REVIEWED	BY	METHOD
R211012-21 10/31/02 11/06/02	J00851 116-F-6 B00-029-238	B00-029	7723-021	GAM		11/12/02	11/14/02	NJV	Gamma Scan
		SOLID							
R211012-22 10/31/02 11/06/02	J00852 116-F-6 B00-029-238	B00-029	7723-022	GAM		11/12/02	11/14/02	NJV	Gamma Scan
		SOLID							
R211012-23 10/31/02 11/06/02	J00853 116-F-6 B00-029-238	B00-029	7723-023	GAM		11/12/02	11/14/02	NJV	Gamma Scan
		SOLID							
R211012-24 10/31/02 11/06/02	J00854 116-F-6 B00-029-238	B00-029	7723-024	GAM		11/12/02	11/14/02	NJV	Gamma Scan
		SOLID							
R211012-25	Method Blank		7723-025	GAM		11/12/02	11/14/02	NJV	Gamma Scan
		SOLID							
		B00-029							

COUNTS OF TESTS BY SAMPLE TYPE

TEST	SAF No	METHOD	REFERENCE	CLIENT	MORE	RE	BLANK	LCS	DUP SPIKE	TOTAL
GAM	B00-029	Gamma Scan	GAMMA_GS	24			1			25
TOTALS				24			1			25

WORK SUMMARY

Page 3

SUMMARY DATA SECTION

Page 8

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-LWS
Version 3.06
Report date 11/14/02

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H1952

7723-025

Method Blank

METHOD BLANK

SDG <u>7723</u>	Client/Case no <u>Hanford</u>	SDG <u>H1952</u>
Contact <u>Melissa C. Mannion</u>	Contract No. <u>630</u>	
Lab sample id <u>R211012-25</u>	Client sample id <u>Method Blank</u>	
Dept sample id <u>7723-025</u>	Material/Matrix <u>SOLID</u>	
	SAF No <u>B00-029</u>	

ANALYTE	CAS NO	RESULT pCi/g	2 σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.058</u>	0.050	U	GAM
Cesium 137	10045-97-3	U		<u>0.054</u>	0.10	U	GAM
Europium 152	14683-23-9	U		<u>0.13</u>	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.19</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.070</u>	0.10	U	GAM
Americium 241	14596-10-2	U		<u>0.047</u>		U	GAM

100 F Area - Quick Turn

QC-BLANK 43122

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H1952

7723-001

J00831

D A T A S H E E T

SDG <u>7723</u>	Client/Case no <u>Hanford</u>	SDG <u>H1952</u>
Contact <u>Melissa C. Mannion</u>	Contract No. <u>630</u>	
Lab sample id <u>R211012-01</u>	Client sample id <u>J00831</u>	
Dept sample id <u>7723-001</u>	Location/Matrix <u>116-F-6</u>	<u>SOLID</u>
Received <u>11/06/02</u>	Collected/Weight <u>10/31/02 08:20</u>	<u>689.2 g</u>
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-238</u>	<u>B00-029</u>

ANALYTE	CAS NO	RESULT pCi/g	2 σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.14</u>	0.050	U	GAM
Cesium 137	10045-97-3	1.05	0.11	<u>0.087</u>	0.10		GAM
Europium 152	14683-23-9	U		<u>0.17</u>	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.27</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.12</u>	0.10	U	GAM
Americium 241	14596-10-2	U		<u>0.088</u>		U	GAM

100 F Area - Quick Turn

DATA SHEETS

Page 1

SUMMARY DATA SECTION

Page 10

Lab id <u>EBRLNE</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>11/14/02</u>

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H1952

7723-002

J00832

D A T A S H E E T

SDG <u>7723</u>	Client/Case no <u>Hanford</u>	SDG <u>H1952</u>
Contact <u>Melissa C. Mannion</u>	Contract No. <u>630</u>	
Lab sample id <u>R211012-02</u>	Client sample id <u>J00832</u>	
Dept sample id <u>7723-002</u>	Location/Matrix <u>116-F-6</u>	<u>SOLID</u>
Received <u>11/06/02</u>	Collected/Weight <u>10/31/02 08:22</u>	<u>725.7 g</u>
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-238</u>	<u>B00-029</u>

ANALYTE	CAS NO	RESULT pCi/g	2 σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		0.048	0.050	U	GAM
Cesium 137	10045-97-3	0.996	0.072	0.059	0.10		GAM
Europium 152	14683-23-9	U		<u>0.12</u>	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.15</u>	0.10	U	GAM
Europium 155	14391-16-3	U		0.097	0.10	U	GAM
Americium 241	14596-10-2	U		0.061		U	GAM

100 F Area - Quick Turn

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H1952

7723-003

J00833

DATA SHEET

SDG <u>7723</u>	Client/Case no <u>Hanford</u>	SDG <u>H1952</u>
Contact <u>Melissa C. Mannion</u>	Contract No. <u>630</u>	
Lab sample id <u>R211012-03</u>	Client sample id <u>J00833</u>	
Dept sample id <u>7723-003</u>	Location/Matrix <u>116-F-6</u>	<u>SOLID</u>
Received <u>11/06/02</u>	Collected/Weight <u>10/31/02 08:24</u>	<u>787.8 g</u>
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-238</u>	<u>B00-029</u>

ANALYTE	CAS NO	RESULT pCi/g	2 σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.066</u>	0.050	U	GAM
Cesium 137	10045-97-3	0.560	0.087	<u>0.084</u>	0.10		GAM
Europium 152	14683-23-9	U		<u>0.19</u>	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.19</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.16</u>	0.10	U	GAM
Americium 241	14596-10-2	U		<u>0.23</u>		U	GAM

100 F Area - Quick Turn

DATA SHEETS

Page 3

SUMMARY DATA SECTION

Page 12

Lab id <u>EBRLNE</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>11/14/02</u>

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H1952

7723-004

J00834

D A T A S H E E T

SDG <u>7723</u>	Client/Case no <u>Hanford</u>	<u>SDG H1952</u>
Contact <u>Melissa C. Mannion</u>	Contract No. <u>630</u>	
Lab sample id <u>R211012-04</u>	Client sample id <u>J00834</u>	
Dept sample id <u>7723-004</u>	Location/Matrix <u>116-F-6</u>	<u>SOLID</u>
Received <u>11/06/02</u>	Collected/Weight <u>10/31/02 08:26</u>	<u>726.7 g</u>
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-238</u>	<u>B00-029</u>

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		0.042	0.050	U	GAM
Cesium 137	10045-97-3	0.337	0.055	0.049	0.10		GAM
Europium 152	14683-23-9	U		<u>0.11</u>	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.14</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.13</u>	0.10	U	GAM
Americium 241	14596-10-2	U		0.17		U	GAM

100 F Area - Quick Turn

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H1952

7723-005

J00835

D A T A S H E E T

SDG <u>7723</u>	Client/Case no <u>Hanford</u>	SDG <u>H1952</u>
Contact <u>Melissa C. Mannion</u>	Contract No. <u>630</u>	
Lab sample id <u>R211012-05</u>	Client sample id <u>J00835</u>	
Dept sample id <u>7723-005</u>	Location/Matrix <u>116-F-6</u>	<u>SOLID</u>
Received <u>11/06/02</u>	Collected/Weight <u>10/31/02 08:28</u>	<u>688.3 g</u>
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-238</u>	<u>B00-029</u>

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.058</u>	0.050	U	GAM
Cesium 137	10045-97-3	U		<u>0.056</u>	0.10	U	GAM
Europium 152	14683-23-9	U		<u>0.16</u>	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.19</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.19</u>	0.10	U	GAM
Americium 241	14596-10-2	U		<u>0.47</u>		U	GAM

100 F Area - Quick Turn

Lab id <u>EBRLNE</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>11/14/02</u>

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H1952

7723-006

J00836

D A T A S H E E T

SDG <u>7723</u>	Client/Case no <u>Hanford</u>	<u>SDG H1952</u>
Contact <u>Melissa C. Mannion</u>	Contract <u>No. 630</u>	
Lab sample id <u>R211012-06</u>	Client sample id <u>J00836</u>	
Dept sample id <u>7723-006</u>	Location/Matrix <u>116-F-6</u>	<u>SOLID</u>
Received <u>11/06/02</u>	Collected/Weight <u>10/31/02 08:30</u>	<u>639.8 g</u>
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-238</u>	<u>B00-029</u>

ANALYTE	CAS NO	RESULT pCi/g	2 σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.090</u>	0.050	U	GAM
Cesium 137	10045-97-3	0.327	0.11	<u>0.086</u>	0.10		GAM
Europium 152	14683-23-9	U		<u>0.18</u>	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.30</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.13</u>	0.10	U	GAM
Americium 241	14596-10-2	U		<u>0.10</u>		U	GAM

100 F Area - Quick Turn

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H1952

7723-007

J00837

D A T A S H E E T

SDG <u>7723</u>	Client/Case no <u>Hanford</u>	SDG <u>H1952</u>
Contact <u>Melissa C. Mannion</u>	Contract <u>No. 630</u>	
Lab sample id <u>R211012-07</u>	Client sample id <u>J00837</u>	
Dept sample id <u>7723-007</u>	Location/Matrix <u>116-F-6</u>	<u>SOLID</u>
Received <u>11/06/02</u>	Collected/Weight <u>10/31/02 08:33</u>	<u>639.8 g</u>
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-238</u>	<u>B00-029</u>

ANALYTE	CAS NO	RESULT pCi/g	2 σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		0.049	0.050	U	GAM
Cesium 137	10045-97-3	0.457	0.066	0.059	0.10		GAM
Europium 152	14683-23-9	U		<u>0.12</u>	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.16</u>	0.10	U	GAM
Europium 155	14391-16-3	U		0.10	0.10	U	GAM
Americium 241	14596-10-2	U		0.065		U	GAM

100 F Area - Quick Turn

DATA SHEETS

Page 7

SUMMARY DATA SECTION

Page 16

Lab id <u>EBRLNE</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>11/14/02</u>

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H1952

7723-008

J00838

D A T A S H E E T

SDG <u>7723</u>	Client/Case no <u>Hanford</u>	SDG <u>H1952</u>
Contact <u>Melissa C. Mannion</u>	Contract No. <u>630</u>	
Lab sample id <u>R211012-08</u>	Client sample id <u>J00838</u>	
Dept sample id <u>7723-008</u>	Location/Matrix <u>116-F-6</u>	<u>SOLID</u>
Received <u>11/06/02</u>	Collected/Weight <u>10/31/02 08:35</u>	<u>700.6 g</u>
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-238</u>	<u>B00-029</u>

ANALYTE	CAS NO	RESULT pCi/g	2 σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.069</u>	0.050	U	GAM
Cesium 137	10045-97-3	0.387	0.073	<u>0.065</u>	0.10		GAM
Europium 152	14683-23-9	U		<u>0.20</u>	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.26</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.19</u>	0.10	U	GAM
Americium 241	14596-10-2	U		<u>0.25</u>		U	GAM

100 F Area - Quick Turn

Lab id <u>EBRLNE</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>11/14/02</u>

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H1952

7723-009

J00839

D A T A S H E E T

SDG <u>7723</u>	Client/Case no <u>Hanford</u>	SDG <u>H1952</u>
Contact <u>Melissa C. Mannion</u>	Contract No. <u>630</u>	
Lab sample id <u>R211012-09</u>	Client sample id <u>J00839</u>	
Dept sample id <u>7723-009</u>	Location/Matrix <u>116-F-6</u>	<u>SOLID</u>
Received <u>11/06/02</u>	Collected/Weight <u>10/31/02 08:37</u>	<u>585.2 g</u>
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-238</u>	<u>B00-029</u>

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.061</u>	0.050	U	GAM
Cesium 137	10045-97-3	0.452	0.069	<u>0.063</u>	0.10		GAM
Europium 152	14683-23-9	U		<u>0.14</u>	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.18</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.15</u>	0.10	U	GAM
Americium 241	14596-10-2	U		0.20		U	GAM

100 F Area - Quick Turn

DATA SHEETS

Page 9

SUMMARY DATA SECTION

Page 18

Lab id <u>EBRLNE</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>11/14/02</u>

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H1952

7723-010

J00840

D A T A S H E E T

SDG <u>7723</u>	Client/Case no <u>Hanford</u>	SDG <u>H1952</u>
Contact <u>Melissa C. Mannion</u>	Contract <u>No. 630</u>	
Lab sample id <u>R211012-10</u>	Client sample id <u>J00840</u>	
Dept sample id <u>7723-010</u>	Location/Matrix <u>116-F-6</u>	<u>SOLID</u>
Received <u>11/06/02</u>	Collected/Weight <u>10/31/02 08:39</u>	<u>746.6 g</u>
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-238</u>	<u>B00-029</u>

ANALYTE	CAS NO	RESULT pCi/g	2 σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.067</u>	0.050	U	GAM
Cesium 137	10045-97-3	U		<u>0.062</u>	0.10	U	GAM
Europium 152	14683-23-9	U		<u>0.18</u>	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.23</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.20</u>	0.10	U	GAM
Americium 241	14596-10-2	U		<u>0.52</u>		U	GAM

100 F Area - Quick Turn

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H1952

7723-011

J00841

DATA SHEET

SDG <u>7723</u>	Client/Case no <u>Hanford</u>	SDG <u>H1952</u>
Contact <u>Melissa C. Mannion</u>	Contract No. <u>630</u>	
Lab sample id <u>R211012-11</u>	Client sample id <u>J00841</u>	
Dept sample id <u>7723-011</u>	Location/Matrix <u>116-F-6</u>	<u>SOLID</u>
Received <u>11/06/02</u>	Collected/Weight <u>10/31/02 08:41</u>	<u>720.8 g</u>
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-238</u>	<u>B00-029</u>

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.067</u>	0.050	U	GAM
Cesium 137	10045-97-3	0.381	0.079	0.078	0.10		GAM
Europium 152	14683-23-9	U		<u>0.13</u>	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.22</u>	0.10	U	GAM
Europium 155	14391-16-3	U		0.098	0.10	U	GAM
Americium 241	14596-10-2	U		0.073		U	GAM

100 F Area - Quick Turn

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H1952

7723-012

J00842

D A T A S H E E T

SDG <u>7723</u>	Client/Case no <u>Hanford</u>	SDG <u>H1952</u>
Contact <u>Melissa C. Mannion</u>	Contract <u>No. 630</u>	
Lab sample id <u>R211012-12</u>	Client sample id <u>J00842</u>	
Dept sample id <u>7723-012</u>	Location/Matrix <u>116-F-6</u>	<u>SOLID</u>
Received <u>11/06/02</u>	Collected/Weight <u>10/31/02 08:43</u>	<u>565.0 g</u>
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-238</u>	<u>B00-029</u>

ANALYTE	CAS NO	RESULT pCi/g	2 σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		0.044	0.050	U	GAM
Cesium 137	10045-97-3	0.339	0.043	0.038	0.10		GAM
Europium 152	14683-23-9	U		<u>0.11</u>	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.15</u>	0.10	U	GAM
Europium 155	14391-16-3	U		0.097	0.10	U	GAM
Americium 241	14596-10-2	U		0.061		U	GAM

100 F Area - Quick Turn

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H1952

7723-013

J00843

DATA SHEET

SDG <u>7723</u>	Client/Case no <u>Hanford</u>	SDG <u>H1952</u>
Contact <u>Melissa C. Mannion</u>	Contract <u>No. 630</u>	
Lab sample id <u>R211012-13</u>	Client sample id <u>J00843</u>	
Dept sample id <u>7723-013</u>	Location/Matrix <u>116-F-6</u>	<u>SOLID</u>
Received <u>11/06/02</u>	Collected/Weight <u>10/31/02 08:46</u>	<u>719.3 g</u>
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-238</u>	<u>B00-029</u>

ANALYTE	CAS NO	RESULT pCi/g	2 σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.065</u>	0.050	U	GAM
Cesium 137	10045-97-3	0.333	0.076	0.071	0.10		GAM
Europium 152	14683-23-9	U		<u>0.16</u>	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.23</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.16</u>	0.10	U	GAM
Americium 241	14596-10-2	U		0.22		U	GAM

100 F Area - Quick Turn

DATA SHEETS

Page 13

SUMMARY DATA SECTION

Page 22

Lab id	<u>EBRLNE</u>
Protocol	<u>Hanford</u>
Version	<u>Ver 1.0</u>
Form	<u>DVD-DS</u>
Version	<u>3.06</u>
Report date	<u>11/14/02</u>

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H1952

7723-014

J00844

D A T A S H E E T

SDG <u>7723</u>	Client/Case no <u>Hanford</u>	SDG <u>H1952</u>
Contact <u>Melissa C. Mannion</u>	Contract <u>No. 630</u>	
Lab sample id <u>R211012-14</u>	Client sample id <u>J00844</u>	
Dept sample id <u>7723-014</u>	Location/Matrix <u>116-F-6</u>	<u>SOLID</u>
Received <u>11/06/02</u>	Collected/Weight <u>10/31/02 08:48</u>	<u>747.8 g</u>
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-238</u>	<u>B00-029</u>

ANALYTE	CAS NO	RESULT pCi/g	2 σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		0.047	0.050	U	GAM
Cesium 137	10045-97-3	0.483	0.045	0.036	0.10		GAM
Europium 152	14683-23-9	U		0.10	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.14</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.11</u>	0.10	U	GAM
Americium 241	14596-10-2	U		0.15		U	GAM

100 F Area - Quick Turn

Lab id <u>EBRLNE</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>11/14/02</u>

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H1952

7723-015

J00845

D A T A S H E E T

SDG <u>7723</u>	Client/Case no <u>Hanford</u>	SDG <u>H1952</u>
Contact <u>Melissa C. Mannion</u>	Contract <u>No. 630</u>	
Lab sample id <u>R211012-15</u>	Client sample id <u>J00845</u>	
Dept sample id <u>7723-015</u>	Location/Matrix <u>116-F-6</u>	<u>SOLID</u>
Received <u>11/06/02</u>	Collected/Weight <u>10/31/02 08:50</u>	<u>695.4 g</u>
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-238</u>	<u>B00-029</u>

ANALYTE	CAS NO	RESULT pCi/g	2 σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.052</u>	0.050	U	GAM
Cesium 137	10045-97-3	U		<u>0.056</u>	0.10	U	GAM
Europium 152	14683-23-9	U		<u>0.17</u>	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.21</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.19</u>	0.10	U	GAM
Americium 241	14596-10-2	U		<u>0.47</u>		U	GAM

100 F Area - Quick Turn

DATA SHEETS

Page 15

SUMMARY DATA SECTION

Page 24

Lab id <u>EBRLNE</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>11/14/02</u>

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H1952

7723-016

J00846

DATA SHEET

SDG <u>7723</u>	Client/Case no <u>Hanford</u>	SDG <u>H1952</u>
Contact <u>Melissa C. Mannion</u>	Contract No. <u>630</u>	
Lab sample id <u>R211012-16</u>	Client sample id <u>J00846</u>	
Dept sample id <u>7723-016</u>	Location/Matrix <u>116-F-6</u>	<u>SOLID</u>
Received <u>11/06/02</u>	Collected/Weight <u>10/31/02 08:52</u>	<u>574.8 g</u>
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-238</u>	<u>B00-029</u>

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.092</u>	0.050	U	GAM
Cesium 137	10045-97-3	1.11	0.11	0.080	0.10		GAM
Europium 152	14683-23-9	U		<u>0.18</u>	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.28</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.13</u>	0.10	U	GAM
Americium 241	14596-10-2	U		0.094		U	GAM

100 F Area - Quick Turn

DATA SHEETS

Page 16

SUMMARY DATA SECTION

Page 25

Lab id <u>EBRLNE</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>11/14/02</u>

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H1952

7723-017

J00847

D A T A S H E E T

SDG <u>7723</u>	Client/Case no <u>Hanford</u>	SDG <u>H1952</u>
Contact <u>Melissa C. Mannion</u>	Contract No. <u>630</u>	
Lab sample id <u>R211012-17</u>	Client sample id <u>J00847</u>	
Dept sample id <u>7723-017</u>	Location/Matrix <u>116-F-6</u>	<u>SOLID</u>
Received <u>11/06/02</u>	Collected/Weight <u>10/31/02 08:54</u>	<u>792.4 g</u>
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-238</u>	<u>B00-029</u>

ANALYTE	CAS NO	RESULT pCi/g	2 σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		0.037	0.050	U	GAM
Cesium 137	10045-97-3	0.352	0.049	0.047	0.10		GAM
Europium 152	14683-23-9	U		0.089	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.13</u>	0.10	U	GAM
Europium 155	14391-16-3	U		0.10	0.10	U	GAM
Americium 241	14596-10-2	U		0.054		U	GAM

100 F Area - Quick Turn

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H1952

7723-018

J00848

D A T A S H E E T

SDG <u>7723</u>	Client/Case no <u>Hanford</u>	SDG <u>H1952</u>
Contact <u>Melissa C. Mannion</u>	Contract <u>No. 630</u>	
Lab sample id <u>R211012-18</u>	Client sample id <u>J00848</u>	
Dept sample id <u>7723-018</u>	Location/Matrix <u>116-F-6</u>	<u>SOLID</u>
Received <u>11/06/02</u>	Collected/Weight <u>10/31/02 08:56</u>	<u>749.4 g</u>
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-238</u>	<u>B00-029</u>

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		0.050	0.050	U	GAM
Cesium 137	10045-97-3	1.83	0.084	0.051	0.10		GAM
Europium 152	14683-23-9	U		<u>0.23</u>	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.16</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.13</u>	0.10	U	GAM
Americium 241	14596-10-2	U		0.17		U	GAM

100 F Area - Quick Turn

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H1952

7723-019

J00849

D A T A S H E E T

SDG <u>7723</u>	Client/Case no <u>Hanford</u>	SDG <u>H1952</u>
Contact <u>Melissa C. Mannion</u>	Contract <u>No. 630</u>	
Lab sample id <u>R211012-19</u>	Client sample id <u>J00849</u>	
Dept sample id <u>7723-019</u>	Location/Matrix <u>116-F-6</u>	<u>SOLID</u>
Received <u>11/06/02</u>	Collected/Weight <u>10/31/02 08:59</u>	<u>724.5 g</u>
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-238</u>	<u>B00-029</u>

ANALYTE	CAS NO	RESULT pCi/g	2 σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		0.048	0.050	U	GAM
Cesium 137	10045-97-3	4.20	0.12	0.055	0.10		GAM
Europium 152	14683-23-9	U		<u>0.16</u>	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.14</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.16</u>	0.10	U	GAM
Americium 241	14596-10-2	U		0.20		U	GAM

100 F Area - Quick Turn

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H1952

7723-020

J00850

D A T A S H E E T

SDG <u>7723</u>	Client/Case no <u>Hanford</u>	SDG <u>H1952</u>
Contact <u>Melissa C. Mannion</u>	Contract <u>No. 630</u>	
Lab sample id <u>R211012-20</u>	Client sample id <u>J00850</u>	
Dept sample id <u>7723-020</u>	Location/Matrix <u>116-F-6</u>	<u>SOLID</u>
Received <u>11/06/02</u>	Collected/Weight <u>10/31/02 09:01</u>	<u>663.1 g</u>
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-238</u>	<u>B00-029</u>

ANALYTE	CAS NO	RESULT pCi/g	2 σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		0.045	0.050	U	GAM
Cesium 137	10045-97-3	0.128	0.050	0.051	0.10		GAM
Europium 152	14683-23-9	U		<u>0.11</u>	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.17</u>	0.10	U	GAM
Europium 155	14391-16-3	U		0.093	0.10	U	GAM
Americium 241	14596-10-2	U		0.062		U	GAM

100 F Area - Quick Turn

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H1952

7723-021

J00851

D A T A S H E E T

SDG <u>7723</u>	Client/Case no <u>Hanford</u>	SDG <u>H1952</u>
Contact <u>Melissa C. Mannion</u>	Contract No. <u>630</u>	
Lab sample id <u>R211012-21</u>	Client sample id <u>J00851</u>	
Dept sample id <u>7723-021</u>	Location/Matrix <u>116-F-6</u>	<u>SOLID</u>
Received <u>11/06/02</u>	Collected/Weight <u>10/31/02 09:03</u>	<u>623.1 g</u>
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-238</u>	<u>B00-029</u>

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.097</u>	0.050	U	GAM
Cesium 137	10045-97-3	1.65	0.14	0.092	0.10		GAM
Europium 152	14683-23-9	U		<u>0.20</u>	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.31</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.13</u>	0.10	U	GAM
Americium 241	14596-10-2	U		0.10		U	GAM

100 F Area - Quick Turn

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H1952

7723-022

J00852

D A T A S H E E T

SDG <u>7723</u>	Client/Case no <u>Hanford</u>	SDG <u>H1952</u>
Contact <u>Melissa C. Mannion</u>	Contract <u>No. 630</u>	
Lab sample id <u>R211012-22</u>	Client sample id <u>J00852</u>	
Dept sample id <u>7723-022</u>	Location/Matrix <u>116-F-6</u>	<u>SOLID</u>
Received <u>11/06/02</u>	Collected/Weight <u>10/31/02 09:05</u>	<u>592.9 g</u>
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-238</u>	<u>B00-029</u>

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.13</u>	0.050	U	GAM
Cesium 137	10045-97-3	1.08	0.17	<u>0.13</u>	0.10		GAM
Europium 152	14683-23-9	U		<u>0.30</u>	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.55</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.19</u>	0.10	U	GAM
Americium 241	14596-10-2	U		<u>0.15</u>		U	GAM

100 F Area - Quick Turn

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H1952

7723-023

J00853

DATA SHEET

SDG <u>7723</u>	Client/Case no <u>Hanford</u>	<u>SDG_H1952</u>
Contact <u>Melissa C. Mannion</u>	Contract No. <u>630</u>	
Lab sample id <u>R211012-23</u>	Client sample id <u>J00853</u>	
Dept sample id <u>7723-023</u>	Location/Matrix <u>116-F-6</u>	<u>SOLID</u>
Received <u>11/06/02</u>	Collected/Weight <u>10/31/02 09:07</u>	<u>705.8 g</u>
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-238</u>	<u>B00-029</u>

ANALYTE	CAS NO	RESULT pCi/g	2 σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.062</u>	0.050	U	GAM
Cesium 137	10045-97-3	1.38	0.11	<u>0.076</u>	0.10		GAM
Europium 152	14683-23-9	U		<u>0.16</u>	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.22</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.14</u>	0.10	U	GAM
Americium 241	14596-10-2	U		<u>0.091</u>		U	GAM

100 F Area - Quick Turn

Lab id <u>EBRLNE</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>11/14/02</u>

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H1952

7723-024

J00854

DATA SHEET

SDG <u>7723</u>	Client/Case no <u>Hanford</u>	SDG <u>H1952</u>
Contact <u>Melissa C. Mannion</u>	Contract <u>No. 630</u>	
Lab sample id <u>R211012-24</u>	Client sample id <u>J00854</u>	
Dept sample id <u>7723-024</u>	Location/Matrix <u>116-F-6</u>	<u>SOLID</u>
Received <u>11/06/02</u>	Collected/Weight <u>10/31/02 09:09</u>	<u>522.5 g</u>
% solids <u>100.0</u>	Custody/SAF No <u>B00-029-238</u>	<u>B00-029</u>

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.095</u>	0.050	U	GAM
Cesium 137	10045-97-3	1.56	0.13	<u>0.089</u>	0.10		GAM
Europium 152	14683-23-9	U		<u>0.21</u>	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.27</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.23</u>	0.10	U	GAM
Americium 241	14596-10-2	U		<u>0.30</u>		U	GAM

100 F Area - Quick Turn

DATA SHEETS

Page 24

SUMMARY DATA SECTION

Page 33

Lab id <u>EBRLNE</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>11/14/02</u>

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP H1952

Test GAM Matrix SOLID
SDG 7723
Contact Melissa C. Mannion

LAB METHOD SUMMARY

GAMMA SCAN
GAMMA SPECTROSCOPY

Client Hanford
Contract No. 630
Contract SDG H1952

RESULTS

LAB RAW SUF-
SAMPLE ID TEST FIX PLANCHET CLIENT SAMPLE ID Cobalt 60 Cesium 137

Preparation batch 7032-074

R211012-01	7723-001	J00831	U	1.05
R211012-02	7723-002	J00832	U	0.996
R211012-03	7723-003	J00833	U	0.560
R211012-04	7723-004	J00834	U	0.337
R211012-05	7723-005	J00835	U	U
R211012-06	7723-006	J00836	U	0.327
R211012-07	7723-007	J00837	U	0.457
R211012-08	7723-008	J00838	U	0.387
R211012-09	7723-009	J00839	U	0.452
R211012-10	7723-010	J00840	U	U
R211012-11	7723-011	J00841	U	0.381
R211012-12	7723-012	J00842	U	0.339
R211012-13	7723-013	J00843	U	0.333
R211012-14	7723-014	J00844	U	0.483
R211012-15	7723-015	J00845	U	U
R211012-16	7723-016	J00846	U	1.11
R211012-17	7723-017	J00847	U	0.352
R211012-18	7723-018	J00848	U	1.83
R211012-19	7723-019	J00849	U	4.20
R211012-20	7723-020	J00850	U	0.128
R211012-21	7723-021	J00851	U	1.65
R211012-22	7723-022	J00852	U	1.08
R211012-23	7723-023	J00853	U	1.38
R211012-24	7723-024	J00854	U	1.56
R211012-25	7723-025	BLK (QC ID=43122)	U	U

Nominal values and limits from method RDLs (pCi/g) 0.050 0.10
100 F Area - Quick Turn

METHOD SUMMARIES

Page 1

SUMMARY DATA SECTION

Page 34

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 11/14/02

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP H1952

Test GAM Matrix SOLID
SDG 7723
Contact Melissa C. Mannion

LAB METHOD SUMMARY

GAMMA SCAN
GAMMA SPECTROSCOPY

Client Hanford
Contract No. 630
Contract SDG H1952

METHOD PERFORMANCE

LAB	RAW	SUF-	MDA	ALIQ	PREP	DILU-	YIELD	EFF	COUNT	FWHM	DRIFT	DAYS	ANAL-		
SAMPLE ID	TEST FIX	CLIENT SAMPLE ID	pCi/g	g	FAC	TION	%	%	min	keV	KeV	HELD	PREPARED	YZED	DETECTOR
Preparation batch 7032-074 2σ prep error 15.0 % Reference Lab Notebook 7024 pg. 074															
R211012-01		J00831	<u>0.14</u>	689						<u>64</u>		12	11/08/02	11/12	02,01,00
R211012-02		J00832	<u>0.048</u>	726						<u>64</u>		12	11/08/02	11/12	MB,07,00
R211012-03		J00833	<u>0.066</u>	788						<u>64</u>		12	11/08/02	11/12	02,03,00
R211012-04		J00834	<u>0.042</u>	727						<u>64</u>		12	11/08/02	11/12	02,04,00
R211012-05		J00835	<u>0.058</u>	688						<u>64</u>		12	11/08/02	11/12	MB,05,00
R211012-06		J00836	<u>0.090</u>	640						<u>57</u>		12	11/08/02	11/12	02,01,00
R211012-07		J00837	<u>0.049</u>	640						<u>57</u>		12	11/08/02	11/12	MB,07,00
R211012-08		J00838	<u>0.069</u>	701						<u>57</u>		12	11/08/02	11/12	02,03,00
R211012-09		J00839	<u>0.061</u>	585						<u>57</u>		12	11/08/02	11/12	02,04,00
R211012-10		J00840	<u>0.067</u>	747						<u>57</u>		12	11/08/02	11/12	MB,05,00
R211012-11		J00841	<u>0.067</u>	721						<u>75</u>		12	11/08/02	11/12	02,01,00
R211012-12		J00842	<u>0.044</u>	565						<u>75</u>		12	11/08/02	11/12	MB,07,00
R211012-13		J00843	<u>0.065</u>	719						<u>75</u>		12	11/08/02	11/12	02,03,00
R211012-14		J00844	<u>0.047</u>	748						<u>75</u>		12	11/08/02	11/12	02,04,00
R211012-15		J00845	<u>0.052</u>	695						<u>75</u>		12	11/08/02	11/12	MB,05,00
R211012-16		J00846	<u>0.092</u>	575						<u>65</u>		12	11/08/02	11/12	02,01,00
R211012-17		J00847	<u>0.037</u>	792						<u>65</u>		12	11/08/02	11/12	MB,07,00
R211012-18		J00848	<u>0.050</u>	749						<u>65</u>		12	11/08/02	11/12	02,04,00
R211012-19		J00849	<u>0.048</u>	724						<u>58</u>		12	11/08/02	11/12	02,04,00
R211012-20		J00850	<u>0.045</u>	663						<u>58</u>		12	11/08/02	11/12	MB,07,00
R211012-21		J00851	<u>0.097</u>	623						<u>58</u>		12	11/08/02	11/12	02,01,00
R211012-22		J00852	<u>0.13</u>	593						<u>31</u>		12	11/08/02	11/12	02,01,00
R211012-23		J00853	<u>0.062</u>	706						<u>31</u>		12	11/08/02	11/12	MB,07,00
R211012-24		J00854	<u>0.095</u>	522						<u>31</u>		12	11/08/02	11/12	02,04,00
R211012-25		BLK (QC ID=43122)	<u>0.058</u>	522						<u>37</u>			11/08/02	11/12	01,01,00
Nominal values and limits from method			0.050	522						100			180		

PROCEDURES REFERENCE GAMMA_GS
CP-100 Ge(Li) Preparation for Commercial Samples, rev 5

AVERAGES ± 2 SD MDA 0.067 ± 0.053
FOR 25 SAMPLES YIELD _____ ± _____

METHOD SUMMARIES

Page 2

SUMMARY DATA SECTION

Page 35

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 11/14/02

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H1952

SDG 7723
Contact Melissa C. Mannion

REPORT GUIDE

Client Hanford
Contract No. 630
Case no SDG_H1952

SAMPLE SUMMARY

The Sample and QC Summary Reports show all samples, including QC samples, reported in one Sample Delivery Group (SDG).

The Sample Summary Report fully identifies client samples and gives the corresponding lab sample identification. The QC Summary Report shows at the sample level how the lab organized the samples into batches and generated QC samples. The Preparation Batch and Method Summary Reports show this at the analysis level.

The following notes apply to these reports:

- * LAB SAMPLE ID is the lab's primary identification for a sample.
- * DEPARTMENT SAMPLE ID is an alternate lab id, for example one assigned by a radiochemistry department in a lab.
- * CLIENT SAMPLE ID is the client's primary identification for a sample. It includes any sample preparation done by the client that is necessary to identify the sample.
- * QC BATCH is a lab assigned code that groups samples to be processed and QCed together. These samples should have similar matrices.

QC BATCH is not necessarily the same as SDG, which reflects samples received and reported together.

- * All Lab Control Samples, Method Blanks, Duplicates and Matrix Spikes are shown that QC any of the samples. Due to possible reanalyses, not all results for all these QC samples may be relevant to the SDG. The Lab Control Sample, Method Blank, Duplicate, Matrix Spike and Method Summary Reports detail these relationships.

REPORT GUIDES

Page 1

SUMMARY DATA SECTION

Page 36

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 11/14/02

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H1952

SDG 7723
Contact Melissa C. Mannion

REPORT GUIDE

Client Hanford
Contract No. 630
Case no SDG H1952

PREPARATION BATCH SUMMARY

The Preparation Batch Summary Report shows all preparation batches in one Sample Delivery Group (SDG) with information necessary to check the completeness and consistency of the SDG.

The following notes apply to this report:

- * The preparation batches are shown in the same order as the Method Summary Reports are printed.
- * Only analyses of planchets relevant to the SDG are included.
- * Each preparation batch should have at least one Method Blank and LCS in it to validate client sample results.
- * The QUALIFIERS shown are all qualifiers other than U, J, B, L and H that occur on any analysis in the preparation batch. The Method Summary Report has these qualifiers on a per sample basis.

These qualifiers should be reviewed as follows:

- X Some data has been manually entered or modified. Transcription errors are possible.
- P One or more results are 'preliminary'. The data is not ready for final reporting.
- 2 There were two or more results for one analyte on one planchet imported at one time. The results in DVD may not be the same as on the raw data sheets.

Other lab defined qualifiers may occur. In general, these should be addressed in the SDG narrative.

REPORT GUIDES

Page 2

SUMMARY DATA SECTION

Page 37

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 11/14/02

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H1952

SDG 7723
Contact Melissa C. Mannion

REPORT GUIDE

Client Hanford
Contract No. 630
Case no SDG_H1952

WORK SUMMARY

The Work Summary Report shows all samples, including QC samples, and all relevant analyses in one Sample Delivery Group (SDG). This report is often useful as supporting documentation for an invoice.

The following notes apply to this report:

- * TEST is a code for the method used to measure associated analytes. Results and related information for each analyte are on the Data Sheet Report. In special cases, a test code used in the summary data section is not the same as in associated raw data. In this case, both codes are shown on the Work Summary.
- * SUFFIX is the lab's code to distinguish multiple analyses (recounts, reworks, reanalyses) of a fraction of the sample. The suffix indicates which result is being reported. An empty suffix normally identifies the first attempt to analyze the sample.
- * The LAB SAMPLE ID, TEST and SUFFIX uniquely identify all supporting data for a result. The Method Summary Report for each TEST has method performance data, such as yield, for each lab sample id and suffix and procedures used in the method.
- * PLANCHET is an alternate lab identifier for work done for one test. It, combined with the TEST and SUFFIX, may be the best link to raw data.
- * For QC samples, only analyses that directly QC some regular sample are shown. The Lab Control Sample, Method Blank, Duplicate, Matrix Spike and Method Summary Reports detail these relationships.
- * The SAS (Special Analytical Services) Number is a client or lab assigned code that reflects special processing for samples, such as rapid turn around. Counts of tests done are lists by SAS number since it is likely to affect prices.

REPORT GUIDES

Page 3

SUMMARY DATA SECTION

Page 38

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 11/14/02

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H1952

SDG 7723
Contact Melissa C. Mannion

REPORT GUIDE

Client Hanford
Contract No. 630
Case no SDG H1952

DATA SHEET

The Data Sheet Report shows all results and primary supporting information for one client sample or Method Blank. This report corresponds to both the CLP Inorganics and Organics Data Sheet.

The following notes apply to this report:

- * TEST is a code for the method used to measure an analyte. If the TEST is empty, no data is available; the analyte was not analyzed for.
- * The LAB SAMPLE ID and TEST uniquely identify work within the Summary Data Section of a Data Package. The Work Summary and Method Summary Reports further identify raw data that underlies this work.

The Method Summary Report for each TEST has method performance data, such as yield, for each Lab Sample ID and a list of procedures used in the method.

- * ERRORS can be labeled TOTAL or COUNT. TOTAL implies a preparation (non-counting method) error has been added, as square root of sum of squares, to the counting error denoted by COUNT. The preparation errors, which may vary by preparation batch, are shown on the Method Summary Report.
- * A RESULT can be 'N.R.' (Not Reported). This means the lab did this work but chooses not to report it now, possibly because it was reported at another time.
- * When reporting a Method Blank, a RESULT can be 'N.A.' (Not Applicable). This means there is no reported client sample work in the same preparation batch as the Blank's result. This is likely to occur when the Method Blank is associated with reanalyses of selected work for a few samples in the SDG.

The following qualifiers are defined by the DVD system:

U The RESULT is less than the MDA (Minimum Detectable Activity).

REPORT GUIDES

Page 4

SUMMARY DATA SECTION

Page 39

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 11/14/02

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H1952

SDG 7723
Contact Melissa C. Mannion

GUIDE, cont.

Client Hanford
Contract No. 630
Case no SDG H1952

DATA SHEET

If the MDA is blank, the ERROR is used as the limit.

- J The RESULT is less than the RDL (Required Detection Limit) and no U qualifier is assigned.
 - B A Method Blank associated with this sample had a result without a U flag and, after correcting for possibly different aliquots, that result is greater than or equal to the MDA for this sample.
- Normally, B is not assigned if U is. When method blank subtraction is shown on this report, B flags are assigned based on the unsubtracted values while U's are assigned based on the subtracted ones. Both flags can be assigned in this case.
- For each sample result, all Method Blank results in the same preparation batch are compared. The Method Summary Report documents this and other QC relationships.
- L Some Lab Control Sample that QC's this sample had a low recovery. The lab can disable assignment of this qualifier.
 - H Similar to 'L' except the recovery was high.
 - P The RESULT is 'preliminary'.
 - X Some data necessary to compute the RESULT, ERROR or MDA was manually entered or modified.
 - 2 There were two or more results available for this analyte. The reported result may not be the same as in the raw data.

Other qualifiers are lab defined. Definitions should be in the SDG narrative.

The following values are underlined to indicate possible problems:

- * An MDA is underlined if it is bigger than its RDL.

REPORT GUIDES

Page 5

SUMMARY DATA SECTION

Page 40

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 11/14/02

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H1952

SDG 7723
Contact Melissa C. Mannion

GUIDE, cont.

Client Hanford
Contract No. 630
Case no SDG_H1952

DATA SHEET

- * An ERROR is underlined if the 1.645 sigma counting error is bigger than both the MDA and the RESULT, implying that the MDA may not be a good estimate of the 'real' minimum detectable activity.
- * A negative RESULT is underlined if it is less than the negative of its 2 sigma counting ERROR.
- * When reporting a Method Blank, a RESULT is underlined if greater than its MDA. If the MDA is blank, the 2 sigma counting error is used in the comparison.

REPORT GUIDES

Page 6

SUMMARY DATA SECTION

Page 41

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 11/14/02

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H1952

SDG 7723
Contact Melissa C. Mannion

REPORT GUIDE

Client Hanford
Contract No. 630
Case no SDG_H1952

LAB CONTROL SAMPLE

The Lab Control Sample Report shows all results, recoveries and primary supporting information for one Lab Control Sample.

The following notes apply to this report:

- * All fields in common with the Data Sheet Report have similar usage. Refer to its Report Guide for details.
- * An amount ADDED is the lab's value for the actual amount spiked into this sample with its ERROR an estimate of the error of this amount.

An amount added is underlined if its ratio to the corresponding RDL is outside protocol specified limits.

- * REC (Recovery) is RESULT divided by ADDED expressed as a percent.
- * The first, computed limits for the recovery reflect:
 1. The error of RESULT, including that introduced by rounding the result prior to printing.

If the limits are labeled (TOTAL), they include preparation error in the result. If labeled (COUNT), they do not.
 2. The error of ADDED.
 3. A lab specified, per analyte bias. The bias changes the center of the computed limits.
- * The second limits are protocol defined upper and lower QC limits for the recovery.
- * The recovery is underlined if it is outside either of these ranges.

REPORT GUIDES

Page 7

SUMMARY DATA SECTION

Page 42

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 11/14/02

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H1952

SDG 7723
Contact Melissa C. Mannion

REPORT GUIDE

Client Hanford
Contract No. 630
Case no SDG H1952

DUPLICATE

The Duplicate Report shows all results, differences and primary supporting information for one Duplicate and associated Original sample.

The following notes apply to this report:

- * All fields in common with the Data Sheet Report have similar usage. This applies both to the Duplicate and Original sample data. Refer to the Data Sheet Report Guide for details.

If the Duplicate has data for a TEST and the lab did not do this test to the Original, the Original's RESULTS are underlined.

- * The RPD (Relative Percent Difference) is the absolute value of the difference of the RESULTS divided by their average expressed as a percent.

If both RESULTS are less than their MDAs, no RPD is computed and a '-' is printed.

For an analyte, if the lab did work for both samples but has data for only one, the MDA from the sample with data is used as the other's result in the RPD.

- * The first, computed limit is the sum, as square root of sum of squares, of the errors of the results divided by the average result as a percent, hence the relative error of the difference rather than the error of the relative difference. The errors include those introduced by rounding the RESULTS prior to printing.

If this limit is labeled TOT, it includes the preparation error in the RESULTS. If labeled CNT, it does not.

This value reported for this limit is at most 999.

- * The second limit for the RPD is the larger of:
 1. A fixed percentage specified in the protocol.

REPORT GUIDES

Page 8

SUMMARY DATA SECTION

Page 43

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 11/14/02

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H1952

SDG 7723
Contact Melissa C. Mannion

GUIDE, cont.

Client Hanford
Contract No. 630
Case no SDG H1952

DUPLICATE

2. A protocol factor (typically 2) times the average MDA as a percent of the average result. This limit applies when the results are close to the MDAs.

- * The RPD is underlined if it is greater than either limit.
- * If specified by the lab, the second limit column is replaced by the Difference Error Ratio (DER), which is the absolute value of the difference of the results divided by the quadratic sum of their one sigma errors, the same errors as used in the first limit.

Except for differences due to rounding, the DER is the same as the RPD divided by the first RPD limit with the limit scaled to 1 sigma.

- * The DER is underlined if it is greater than the sigma factor, typically 2 or 3, shown in the header for the first RPD limit.

REPORT GUIDES

Page 9

SUMMARY DATA SECTION

Page 44

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 11/14/02

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H1952

SDG 7723
Contact Melissa C. Mannion

REPORT GUIDE

Client Hanford
Contract No. 630
Case no SDG H1952

MATRIX SPIKE

The Matrix Spike Report shows all results, recoveries and primary supporting information for one Matrix Spike and associated Original sample.

The following notes apply to this report:

- * All fields in common with the Data Sheet Report have similar usage. This applies both to the Spiked and Original sample data. Refer to the Data Sheet Report Guide for details.

If the Spike has data for a TEST and the lab did not do this test to the Original, the Original's RESULTS are underlined.

- * An amount ADDED is the lab's value for the actual amount spiked into the Spike sample with its ERROR an estimate of the error of this amount.

An amount is underlined if its ratio to the corresponding RDL is outside protocol specified limits.

- * REC (Recovery) is the Spike RESULT minus the Original RESULT divided by ADDED expressed as a percent.

- * The first, computed limits for the recovery reflect:

1. The errors of the two RESULTS, including those introduced by rounding them prior to printing.

If the limits are labeled (TOTAL), they include preparation error in the result. If labeled (COUNT), they do not.

2. The error of ADDED.

3. A lab specified, per analyte bias. The bias changes the center of the computed limits.

- * The second limits are protocol defined upper and lower QC limits

REPORT GUIDES

Page 10

SUMMARY DATA SECTION

Page 45

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 11/14/02

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H1952

SDG 7723
Contact Melissa C. Mannion

GUIDE, cont.

Client Hanford
Contract No. 630
Case no SDG_H1952

MATRIX SPIKE

for the recovery.

These limits are left blank if the Original RESULT is more than a protocol defined factor (typically 4) times ADDED. This is a way of accounting for that when the spike is small compared to the amount in the original sample, the recovery is unreliable.

- * The recovery is underlined (out of spec) if it is outside either of these ranges.

REPORT GUIDES

Page 11

SUMMARY DATA SECTION

Page 46

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 11/14/02

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H1952

SDG 7723
Contact Melissa C. Mannion

REPORT GUIDE

Client Hanford
Contract No. 630
Case no SDG_H1952

METHOD SUMMARY

The Method Summary Report has two tables. One shows up to five results measured using one method. The other has performance data for the method. There is one report for each TEST, as used on the Data Sheet Report.

The following notes apply to this report:

- * Each table is subdivided into sections, one for each preparation batch. A preparation batch is a group of aliquots prepared at roughly the same time in one work area of the lab using the same method.

There should be Lab Control Sample and Method Blank results in each preparation batch since this close correspondence makes the QC meaningful. Depending on lab policy, Duplicates need not occur in each batch since they QC sample dependencies such as matrix effects.

- * The RAW TEST column shows the test code used in the raw data to identify a particular analysis if it is different than the test code in the header of the report. This occurs in special cases due to method specific details about how the lab labels work.

The Lab Sample or Planchet ID combined with the (Raw) Test Code and Suffix uniquely identify the raw data for each analysis.

- * If a result is less than both its MDA and RDL, it is replaced by just 'U' on this report. If it is greater than or equal to the RDL but less than the MDA, the result is shown with a 'U' flag.

The J and X flags are as on the data sheet.

- * Non-U results for Method Blanks are underlined to indicate possible contamination of other samples in the preparation batch. The Method Blank Report has supporting data.
- * Lab Control Sample and Matrix Spike results are shown as: ok, No data, LOW or HIGH, with the last two underlined. 'No data'

REPORT GUIDES

Page 12

SUMMARY DATA SECTION

Page 47

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 11/14/02

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H1952

SDG 7723
Contact Melissa C. Mannion

GUIDE, cont.

Client Hanford
Contract No. 630
Case no SDG H1952

METHOD SUMMARY

means no amount ADDED was specified. 'LOW' and 'HIGH' correspond to when the recovery is underlined on the Lab Control Sample or Matrix Spike Report. See these reports for supporting data.

- * Duplicate sample results are shown as: ok, No data, or OUT, with the last two underlined. 'No data' means there was no original sample data found for this duplicate. 'OUT' corresponds to when the RPD is underlined on the Duplicate Report. See this report for supporting data.
- * If the MDA column is labeled 'MAX MDA', there was more than one result measured by the reported method and the MDA shown is the largest MDA. If not all these results have the same RDL, the MAX MDA reflects only those results with RDL equal to the smallest one.

MDAs are underlined if greater than the printed RDL.

- * Aliquots are underlined if less than the nominal value specified for the method.
- * Preparation factors are underlined if greater than the nominal value specified for the method.
- * Dilution factors are underlined if greater than the nominal value specified for the method.
- * Residues are underlined if outside the range specified for the method. Residues are not printed if yields are.
- * Yields, which may be gravimetric, radiometric or some type of recovery depending on the method, are underlined if outside the range specified for the method.
- * Efficiencies are underlined if outside the range specified for the method. Efficiencies are detector and geometry dependent so this test is only approximate.

REPORT GUIDES

Page 13

SUMMARY DATA SECTION

Page 48

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 11/14/02

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H1952

SDG 7723
Contact Melissa C. Mannion

GUIDE, cont.

Client Hanford
Contract No. 630
Case no SDG H1952

METHOD SUMMARY

- * Count times are underlined if less than the nominal value specified for the method.
- * Resolutions (as FWHM; Full Width at Half Max) are underlined if greater than the method specified limit.
- * Tracer drifts are underlined if their absolute values are greater than the method specified limit. Tracer drifts are not printed if percent moistures are.
- * Days Held are underlined if greater than the holding time specified in the protocol.
- * Analysis dates are underlined if before their planchet's preparation date or, if a limit is specified, too far after it.

For some methods, ratios as percentages and error estimates for them are computed for pairs of results. A ratio column header like '1+3' means the ratio of the first result column and the third result column.

Ratios are not computed for Lab Control Sample, Method Blank or Matrix Spike results since their matrices are not necessarily similar to client samples'.

The error estimate for a ratio of results from one planchet reflects only counting errors since other errors should be correlated. For a ratio involving different planchets, if QC limits are computed based on total errors, the error for the ratio allows for the preparation errors for the planchets.

The ratio is underlined (out of spec) if the absolute value of its difference from the nominal value is greater than its error estimate. If no nominal value is specified, this test is not done.

For Gross Alpha or Gross Beta results, there may be a column showing the sum of other Alpha or Beta emitters. This sum includes all relevant

REPORT GUIDES

Page 14

SUMMARY DATA SECTION

Page 49

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 11/14/02

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H1952

SDG 7723
Contact Melissa C. Mannion

GUIDE, cont.

Client Hanford
Contract No. 630
Case no SDG H1952

METHOD SUMMARY

results in the DVD database, whether reported or not. Results in the sum are weighted by a particles/decay value specified by the lab for each relevant analyte. Results less than their MDA are not included. No sums are computed for Lab Control, Method Blank or Matrix Spike samples since their various planchets may not be physically related.

If a ratio of total isotopic to Gross Alpha or Beta is shown, the error for the ratio reflects both the error in the Gross result and the sum, as square root of sum of squares, of the errors in the isotopic results.

For total elemental uranium or thorium results, there may be a column showing the total weight computed from associated isotopic results. Ignoring results less than their MDAs, this is a weighted sum of the isotopic results. The weights depend on the molecular weight and half-life of each isotope so as to convert activities (decays) to weight (atoms).

If a ratio of total computed to measured elemental uranium or thorium is shown, the error for the ratio reflects the errors in all the measurements.

REPORT GUIDES

Page 15

SUMMARY DATA SECTION

Page 50

Lab id EBRLNE
Protocol Hanford
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 11/14/02

Bechtel Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				B00-029-238		Page 1 of 5		
Collector MT Stankovich		Company Contact Mike Stankovich		Telephone No. 531-7620		Project Coordinator TRENT, SJ		Price Code 2D Data Turnaround		
Project Designation 100 F Area - Quick Turn		Sampling Location 126-F-1 H1952 (7723)		SAF No. B00-029		Air Quality <input type="checkbox"/> 7.2ap				
Ice Chest No. ERC-02-005		Field Logbook No. EL-1535-5		COA R10F352000		Method of Shipment FedEx				
Shipped To (TMA)RECRA		Offsite Property No. A030020				Bill of Lading/Air Bill No. SEE OSC				
POSSIBLE SAMPLE HAZARDS/REMARKS Radioactive Special Handling and/or Storage			Preservation	None						
			Type of Container	Marinelli						
			No. of Container(s)	1						
			Volume	500mL						
SAMPLE ANALYSIS			See item (1) in Special Instructions.							
Sample No.	Matrix *	Sample Date	Sample Time							
J00831	SOIL	0822	0820	✓						
J00832	SOIL	0822	0822	✓						
J00833	SOIL	0824	0824	✓						
J00834	SOIL	0826	0826	✓						
J00835	SOIL	0828	0828	✓						
CHAIN OF POSSESSION					SPECIAL INSTRUCTIONS					
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time		(1) Gamma Spectroscopy - Screen (Americium-241, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155) Personnel not available to relinquish samples from the 3728 Ref# JB on 11/14/02		
REF 3B 11402		1320		S J GALE 11402		1320				
S J GALE 11402		1320		FED EX						
FED EX 11/6/02		9:45		FED EX 11/6/02		9:45 AM				
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time				
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time		Matrix * S=Soil SS=Soil/Sediment SC=Soil/Cement SL=Soil/Liquid W=Water O=Oil A=Air DS=Dry Solid DL=Dry Liquid T=Thick W=Wipe L=Liquid V=Vegetation X=Other		
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time				
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time				
LABORATORY SECTION		Received By		Title		Date/Time				
FINAL SAMPLE DISPOSITION		Disposal Method		Disposed By		Date/Time				

Bechtel Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				B00-029-238		Page 2 of 2									
Collector MT Stankovich		Company Contact Mike Stankovich		Telephone No. 531-7620		Project Coordinator TRENT, SJ		Price Code 2D Data Turnaround									
Project Designation 100 F Area - Quick Turn		Sampling Location 126-F-1		H1952 (7723)		SAF No. B00-029		Air Quality <input type="checkbox"/> 7-day									
Ice Chest No. ERC 02 005		Field Logbook No. EI-1535-5		COA R10F352000		Method of Shipment FedEx											
Shipped To (TM)/RECRA		Offsite Property No. A030 020				Bill of Lading/Air Bill No. SEE OSPC											
POSSIBLE SAMPLE HAZARDS/REMARKS Radioactive Special Handling and/or Storage				Preservation	None												
				Type of Container	Marinelli												
				No. of Container(s)	1												
				Volume	500mL												
SAMPLE ANALYSIS				See Item (1) in Special Instructions.													
Sample No.	Matrix *	Sample Date	Sample Time														
J00836	SOIL	10-31-02	0830	✓													
J00837	SOIL	10-31-02	0833	✓													
J00838	SOIL	10-31-02	0835	✓													
J00839	SOIL	10-31-02	0837	✓													
J00840	SOIL	10-31-02	0839	✓													
CHAIN OF POSSESSION				SPECIAL INSTRUCTIONS				Matrix * S=Soil SD=Soilment SO=Solid SL=Sludge W=Water O=Oil A=Air DB=Dry Solid DL=Dry Liquid T=Time WP=Wipe L=Liquid V=Vegetation X=Other									
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time											
<i>MT Stankovich</i>		10-31-02		<i>313/3728</i>		10-31-02 1500											
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time											
REF 3B		1140Z 1320		<i>SEAL</i>		1140Z 1320											
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time											
<i>SSGILE</i>		1140Z 1320		<i>FED EX</i>													
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time											
<i>F9D Ex</i>		11/6/02 9:45		<i>F9D Ex</i>		11/6/02 9:45 AM											
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time											
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time											
LABORATORY SECTION		Received By				Title				Date/Time							
FINAL SAMPLE DISPOSITION		Disposal Method				Disposed By				Date/Time							

Bechtel Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				B00-029-238		Page 3 of 5	
Collector MT Stankovich		Company Contact Mike Stankovich		Telephone No. 531-7620		Project Coordinator TRENT, SJ		Price Code 20 Data Turnaround	
Project Designation 100 F Area - Quick Turn		Sampling Location 126-F-1		H1952 (7723)		SAF No. B00-029		Air Quality <input type="checkbox"/> 7-day	
Ice Chest No. ERC 02 005		Field Logbook No. EI-1535-5		COA R10F352000		Method of Shipment FedEx			
Shipped To TMA/RECRA		Offsite Property No. A030 020		Bill of Lading/Air Bill No. SEE OSPC					
POSSIBLE SAMPLE HAZARDS/REMARKS Radioactive Special Handling and/or Storage				Preservation		None			
				Type of Container		Marinelli			
				No. of Container(s)		1			
				Volume		500mL			
SAMPLE ANALYSIS				See Item (1) in Special Instructions.					
Sample No.		Matrix *		Sample Date		Sample Time			
J00841		SOIL		10-31-02		0841		✓	
J00842		SOIL		10-31-02		0843		✓	
J00843		SOIL		10-31-02		0846		✓	
J00844		SOIL		10-31-02		0848		✓	
J00845		SOIL		10-31-02		0850		✓	
CHAIN OF POSSESSION				SPECIAL INSTRUCTIONS				Matrix * S=Soil SS=Sludge SC=Solid SL=Sludge W=Water O=Oil A=Air DS=Dry Solid DL=Dry Liquid T=Thick W=Wipe L=Liquid V=Vegetation X=Other	
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time			
MT Stankovich		10-31-02 1500		315/3728		10-31-02 1500			
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time			
REF 3B		11402 1320		SJ GALE		11402 1320			
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time			
SJ GALE		11402 1320		FED EX					
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time			
FED EX		9:45 11/6/02		FED EX		11/6/02 9:45 AM			
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time		Personnel not available to relinquish samples from the 3728 Ref # 3B on 11/10/02	
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time			
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time			
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time			
LABORATORY SECTION		Received By				Title			
FINAL SAMPLE DISPOSITION		Disposal Method				Disposed By			
						Date/Time			

Bechtel Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				B00-029-238		Page 4 of 5													
Collector MT Stankovich		Company Contact Mike Stankovich		Telephone No. 531-7620		Project Coordinator TRENT, SJ		Price Code 20 Data Turnaround													
Project Designation 100 F Area - Quick Turn		Sampling Location 126-F-1		H1952 (7728)		SAF No. B00-029		Air Quality <input type="checkbox"/> 7-day													
Ice Chest No. ERC 02 005		Field Logbook No. EI-1535-5		COA R10F352000		Method of Shipment FedEx															
Shipped To TMA/RECRA		Offsite Property No. A030 020				Bill of Lading/Air Bill No. SEE OSPC															
POSSIBLE SAMPLE HAZARDS/REMARKS <i>Radioactive</i> Special Handling and/or Storage			Preservation	None																	
			Type of Container	Marinelli																	
			No. of Container(s)	1																	
			Volume	500ml.																	
SAMPLE ANALYSIS				See item (1) in Special Instructions.																	
Sample No.	Matrix *	Sample Date	Sample Time																		
J00846	SOIL	10-31-02	0852	✓																	
J00847	SOIL	10-31-02	0854	✓																	
J00848	SOIL	10-31-02	0856	✓																	
J00849	SOIL	10-31-02	0859	✓																	
J00850	SOIL	10-31-02	0901	✓																	
CHAIN OF POSSESSION				Sign/Print Names		SPECIAL INSTRUCTIONS (1) Gamma Spectroscopy - Screen (Americium-241, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155) Personnel not available to relinquish samples from the 3728 Ref # 38 on 11/14/02						Matrix * S=Soil SS=Sediment SO=Solid SL=Sludge W=Water O=Oil A=Air DS=Drum Solids DL=Drum Liquids T=Times W=Wipe L=Liquid V=Vegetation X=Other									
Relinquished By/Removed From		Date/Time		Received By/Stored In										Date/Time							
MT Stankovich		10-31-02 1500		3B/3728										10-31-02 1500							
REF 3B		11/4/02 1320		SUGALE										11/4/02 1320							
SUGALE		11/4/02 1320		FED EX																	
FED EX		11/6/02 9:45		FED EX										11/6/02 9:45 am							
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time															
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time															
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time															
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time															
LABORATORY SECTION		Received By		Title		Date/Time															
FINAL SAMPLE DISPOSITION		Disposal Method		Disposed By		Date/Time															

Bechtel Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				B00-029-238		Page 2 of 2		
Collector MT Stankovich		Company Contact Mike Stankovich		Telephone No. 531-7620		Project Coordinator TRENT, SJ		Price Code 2D Data Turnaround		
Project Designation 100 F Area - Quick Turn		Sampling Location 126-F-1		H1952 (7723)		SAF No. B00-029		Air Quality <input type="checkbox"/> 7. day		
Ice Chest No. ERC 02 005		Field Logbook No. EI-1535-5		COA R10F352000		Method of Shipment FedEx				
Shipped To TMA/RECRA		Offsite Property No. A030 020		Bill of Lading/Air Bill No. SEE OSPC						
POSSIBLE SAMPLE HAZARDS/REMARKS Radioactive Special Handling and/or Storage			Preservation	None						
			Type of Container	Marinelli						
			No. of Container(s)	1						
			Volume	500mL						
SAMPLE ANALYSIS				See Item (1) in Special Instructions.						
Sample No.	Matrix *	Sample Date	Sample Time							
J00851	SOIL	10-31-02	0903	✓						
J00852	SOIL	10-31-02	0905	✓						
J00853	SOIL	10-31-02	0907	✓						
J00854	SOIL	10-31-02	0909	✓						
CHAIN OF POSSESSION				SPECIAL INSTRUCTIONS				Matrix * B=Soil SP=Sludge SO=Solid SL=Sludge W=Water O=Oil A=Air DL=Drem Solids LL=Drem Liquids T=Time WP=Wipe L=Liquid V=Vegetation X=Other		
Relinquished By/Removed From <i>MT Stankovich</i>		Date/Time <i>10-31-02</i>		Received By/Stored In <i>3B/3728</i>		Date/Time <i>10-31-02 1500</i>				
Relinquished By/Removed From <i>ROF 3B</i>		Date/Time <i>11402 1320</i>		Received By/Stored In <i>SJ GALE</i>		Date/Time <i>11402 1320</i>				
Relinquished By/Removed From <i>SJ GALE</i>		Date/Time <i>11402 1320</i>		Received By/Stored In <i>FED EX</i>		Date/Time				
Relinquished By/Removed From <i>Fed Ex</i>		Date/Time <i>11/6/02 9:45</i>		Received By/Stored In <i>Joe Jones</i>		Date/Time <i>11/6/02 9:45 PM</i>				
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time				
LABORATORY SECTION		Received By		Title		Date/Time				
FINAL SAMPLE DISPOSITION		Disposal Method		Disposed By		Date/Time				

EBERLINE SERVICES

Richmond, CA Laboratory

ANALYTICAL SERVICES GROUP

SAMPLE RECEIPT CHECKLIST

SAMPLE RECEIPT

Client: Fluor Hanford Date/Time received 11/6/02 9:45
 CoC No. B00-029-238
 Container I.D. No. ERC-02-005 Requested TAT (Days) 7 P.O. Received Yes [] No []

INSPECTION

1. Custody seals on shipping container intact? Yes [☒] No [] N/A []
2. Custody seals on shipping container dated & signed? Yes [☒] No [] N/A []
3. Custody seals on sample containers intact? Yes [☒] No [] N/A []
4. Custody seals on sample containers dated & signed? Yes [☒] No [] N/A []
5. Packing material is: 11/6/02 Wet [] Dry [☒]
6. Number of samples in shipping container: 25 24
7. Number of containers per sample: 1 (Or see CoC _____)
8. Paperwork agrees with samples? Yes [☒] No []
9. Samples have: Tape [] Hazard labels [] Rad labels [] Appropriate sample labels [☒]
10. Samples are: In good condition [☒] Leaking [] Broken Container [] Missing []
11. Describe any anomalies: _____

13. Was P.M. notified of any anomalies? Yes [] No [] Date _____
14. Received by [Signature] Date: 11/6/02 Time: 9:45 AM

Customer Sample
No.

cpm

mr/hr

wipe

Customer Sample
No.

cpm

mr/hr

wipe

Ion Chamber Ser. No. _____

Calibration date _____

Alpha meter Ser. No. _____

Calibration date _____

Survey Meter Ser. No. _____

Calibration date _____